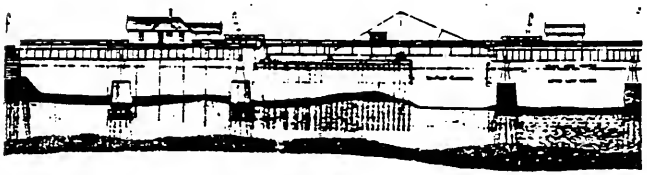
THE BRIDGES

OVER AND THRU THE FORT POINT CHANNEL

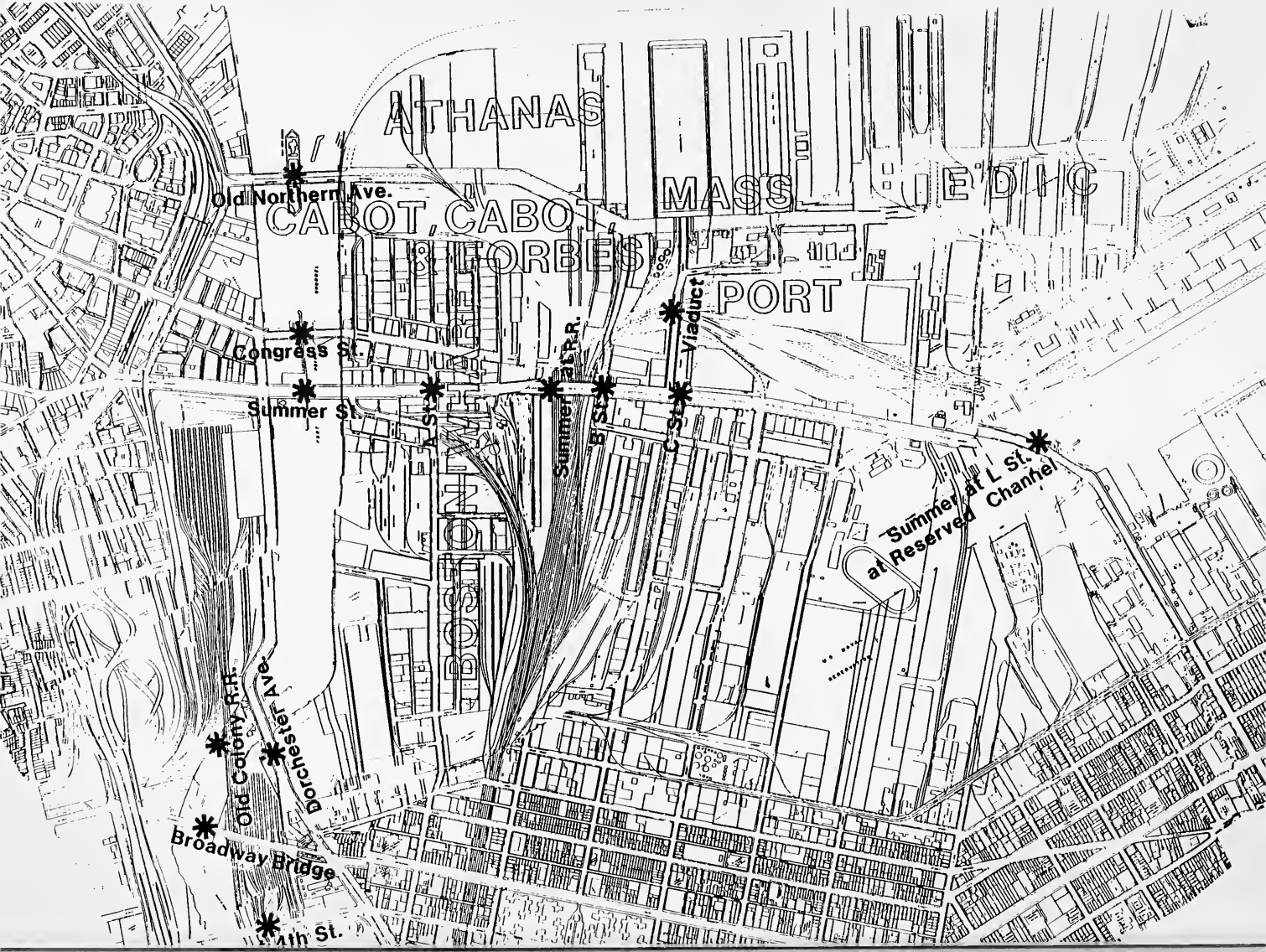
HISTORICAL BACKGROUND and ENGINEERING SIGNIFICANCE

of the FORT POINT CHANNEL BRIDGES

- The Movable Bridges over the Channel
- The Fixed Bridges over the Railroads



Prepared for the NEA Study of Bridges and
Grade Changes in the Fort Point Channel District
by the Boston Redevelopment Authority 1985


ATHANAS
MASS
EDIC
CABOT, CABOT
& FORBES
PORT
Old Northern Ave.
Congress St.
Summer St.
A St.
Summer at R.R.
B St.
C St.
Viaduct
Summer at L St.
at Reserved Channel
Old Colony R.R.
Dorchester Ave.
Broadway Bridge
11th St.

Bridge	Type	Original Span	Builder, Company, Span	Current Status
OLD NORTHERN AVENUE BRIDGE	Pivotal lift, rim bearing type of swing bridge of steel and concrete 283' spans made up of two 125' long spaces supported on four central tower posts of the inside of four sets of pin connected trusses. These posts carry load to a circular drum, 40' in diameter which in turn is supported by 56 steel wheels running on a track along the rim of the granite island pier. Power to operate drum provided by compressed air from two air compressors which generate nominal pressure of 200 L.C./sq. inch. This pressure used to operate eight end lifts (one at free end of each truss) while a reduced pressure of 70 lbs. is delivered to two independent rack and pinion movements attached to the track of the draw pier.		1908	Scheduled to be replaced by new Northern Avenue Bridge Eligible for National Register. To be preserved in open position.
CONGRESS STREET BRIDGE	Single leaf electric bascule bridge. Counter weight still in place. Elegant light standards.	A steam operated swing draw span 1878	1930	Bridge has been fixed. Posted for weight restrictions 14T X 2 axles 20T X 3 axles Sufficiency rating-54.4 Design $165K-'85 Construction $635K-'86
SUMMER STREET over FT. PT. CHANNEL	Retractible draw whose moving span is pulled diagonally away from the fixed shore space on several sets of rails. King-post truss arrangement of the superstructure. When draw is opened, the front ends of the cantilevered channel span are carried by suspension rods passing over Sanson posts erected at middle of span and then back to rear end of span. Bridge is 60' wide between railings. Drawway is 40' in width. Steampower originally used to operate. Later was electrified.	A railroad swing bridge orlginally	1898 T. Willis Pratt-Inventor of retractible draw John E. Cheney was city engineer who was partial to retractible draw bridges. The contract for building and erecting the draw was made with the King Bridge Company of Cleveland, Ohio. The contract for the rest of the bridge and engine house went to William Miller of Boston. The machinery was built by Miller Shaw of Cambridge and the trucks were furnished by Charles Carr of Boston. 1892	Motors removed in 1957 Deck needs replaced; stringers to be added to each bay Sufficiency rating-55.6 Design-$335K-'85 Construction $1,500,000-'87
SUMMER STREET over RESERVED CHANNEL @ L STREET	Double retractable bridge. Parallel spans pull away from center in opposite directions. Electric draw operated from small office on S.W. side of bridge.			Additional stringers needed

Bridge	Type	Original Span	Builder, Company, Date	Current Status
BROADWAY BRIDGE & FRONTAGE, ALBANY AND HERALD STREET	Superstructure consists of two riveted L.C. trusses on either side of roadway. The 800T weight of the draw is carried by a phosphor bronze disc, 26" in diameter placed between two hardened steel discs. Six trucks, running on a track 40' in diameter, keep draw balanced. Track is supported on circular steel drum. Two 20 hp. electric motors on underside of draw engage a rack on drum to turn the span. 210' long by 60' wide swing bridge of center bearing type, supported on underside circular steel drum, two moors on uderside of draw engage a rack on the drum to turn span.	First built in 1871, designed by Willis Pratt and constructed by the Mosley Iron Bridge Company of Hyde Park (Mosley of bowstring truss fame) the drawspan, one of five sections in the 1100' structure was supported by 16 iron screw piles-the scre piles settled unevenly causing distortion of entire bridge. The new chief engineer, Joseph Davis, had a replacement center bearing giving span constructed by the Watson Manufacturing Company of Paterson, N.J. in 1875.	Boston Bridge Works 1914	Sufficiency rating 35.2 Design-$160K-'85 Construction $600K-'88 Removal for 3rd Harbor
		Federal Street		
		Mt. Washington Street		
WEST FOURTH STREET over FOUNDRY; DOVER STREET BRIDGE	Retractable bridge	Earliest route to S. Boston Built in 1805 Again in 1958 Retractible draw of 1977	1876	Removal for 3rd Harbor
DORCHESTER AVENUE BRIDGE	Fixed span of simple drawbridge			Connects Central Artery with Dorchester Avenue To be replaced under MDPW emergency bridge replacement $4.4 million

Bridge	Type	Builder, Company, Date	Original Span	Current Status
OLD COLONY RAILROAD BRIDGE	A scherzer rolling-lift bascule drawbridge. The leaf moves back as it rises on large rockers. Each leaf worked by 50 hp motor on platform 30' above tracks through a rack and pinion arrangement, each motor drove 60' (operating strut) back and forth, raising or lowering leaf through a pin connection at top end of truss. 30 seconds required to open or close. Each 500T draw span could be raised and lowered independently as is revolved 80° in a vertical plan. The rolling segment at the heel of each truss is an 80° segment of a circle 52' in diameter. Shoe plates attached to the segment have rectangular holes through them to engage teeth cast on the top of the horizontal track plates. These prevent span from slipping and act as guides when the span is being revolved. Three double-tracks through riveted truss spaces. Bridge is skewed to direction 42' channel; the trusses range from 83' to 113'.	William Scherzer, Scherzer Rolling Lift Bridge Company, Chicago 1900	An 1886 draw bridge	Removal for 3rd Harbor
SUMMER over A STREET				Girders need reinforced Sufficiency rating 41 Design $80K-'85 Construction $255K-'87
SUMMER over B STREET	Stone and steel viaduct to the railroad			Flanges need reinforced Sufficieny rating 50 Design $225K-'85 Construction-$850K-'87
SUMMER over C STREET				Intensive damage Sufficiency rating 37 Design $135K-'85 Construction-$510K-'87
SUMMER over RAILROAD	Four span Baltimore truss 710' in length. Backspan made up of three pin connected trusses 18' above level of tracks.	William B. Moore, bridge engineer at the Edge Moore branch of the American Bridge Company 1901		
WEST SECOND over CONRAIL				Replacement necessary. $820K

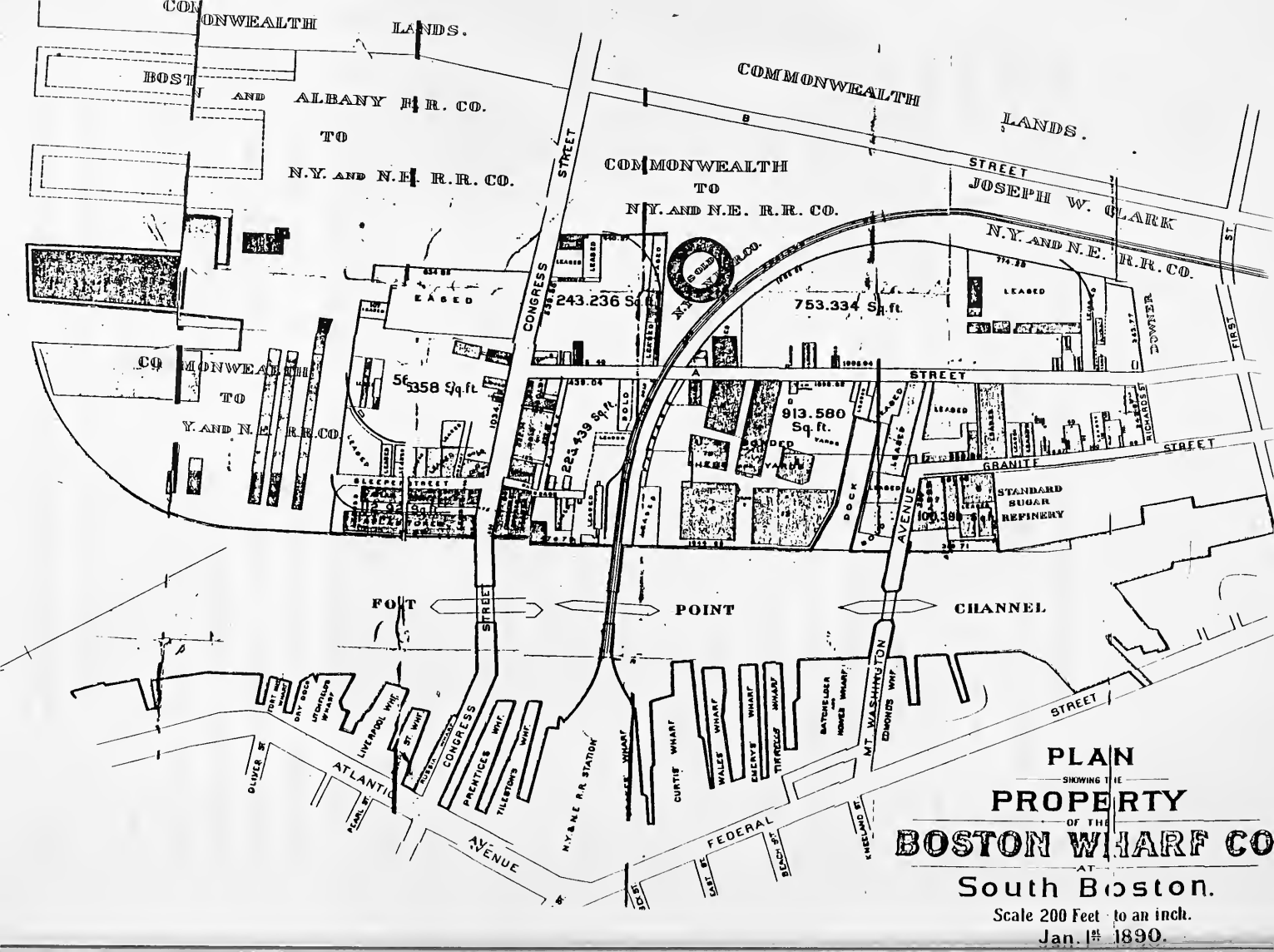
EXCAVATIONS FOR THE NEW AIR LINE RAILROAD.

What is presently the Fort Point Channel area was, until the early 19th century, marshland and tidal flats. Its western shore was known as South Cove, and to the east was known as Dorchester Flats. These shores led into the South Bay, which extended to Roxbury and terminated in the Roxbury Brook and Dorchester Creek. South Boston was an undeveloped area with ten families. Boston Neck and Roxbury, which made up the western shore of South Cove, were defense areas for Boston Proper during the Revolution, but was most important as the only roadway to the mainland.

Beginning as a farming village, Roxbury's economy was dependent on its crops and artisan trade, and the lowland along the Roxbury Neck was used primarily as pasturage and hay fields until the 1800's with some residential and commercial structures clustered along the neck road. With the growth of Boston after the Revolution, the marshland along the neck was divided and sold for development. The low lying neck land developed as a mixture of some residential and industrial buildings, initially built of wood and later of brick. Textile mills, ropewalks, a piano factory, Solomon Willard's clock company, lumber and stone yards appeared between Dudley Street and the Boston line.

Industrial development was facilitated by the development of the Roxbury Canal, begun in 1795, which provided a convenient source of transportation to and from Boston Harbor. The canal followed an old streambed along what is now Harrison Avenue. Rapid changes in transportaion systems and the process of landfilling made much of the Roxbury Canal obsolete by 1820, and inland portions of it were filled in piecemeal over a period of sixty years.

In 1804, South Boston was annexed, and legislation was passed to allow land fill to create land for commercial development. The South Boston Bridge,



PLAN

SHOWING THE

PROPERTY

OF THE

BOSTON WHARF CO

AT

South Boston.

Scale 200 Feet to an inch.

Jan. 1st 1890.

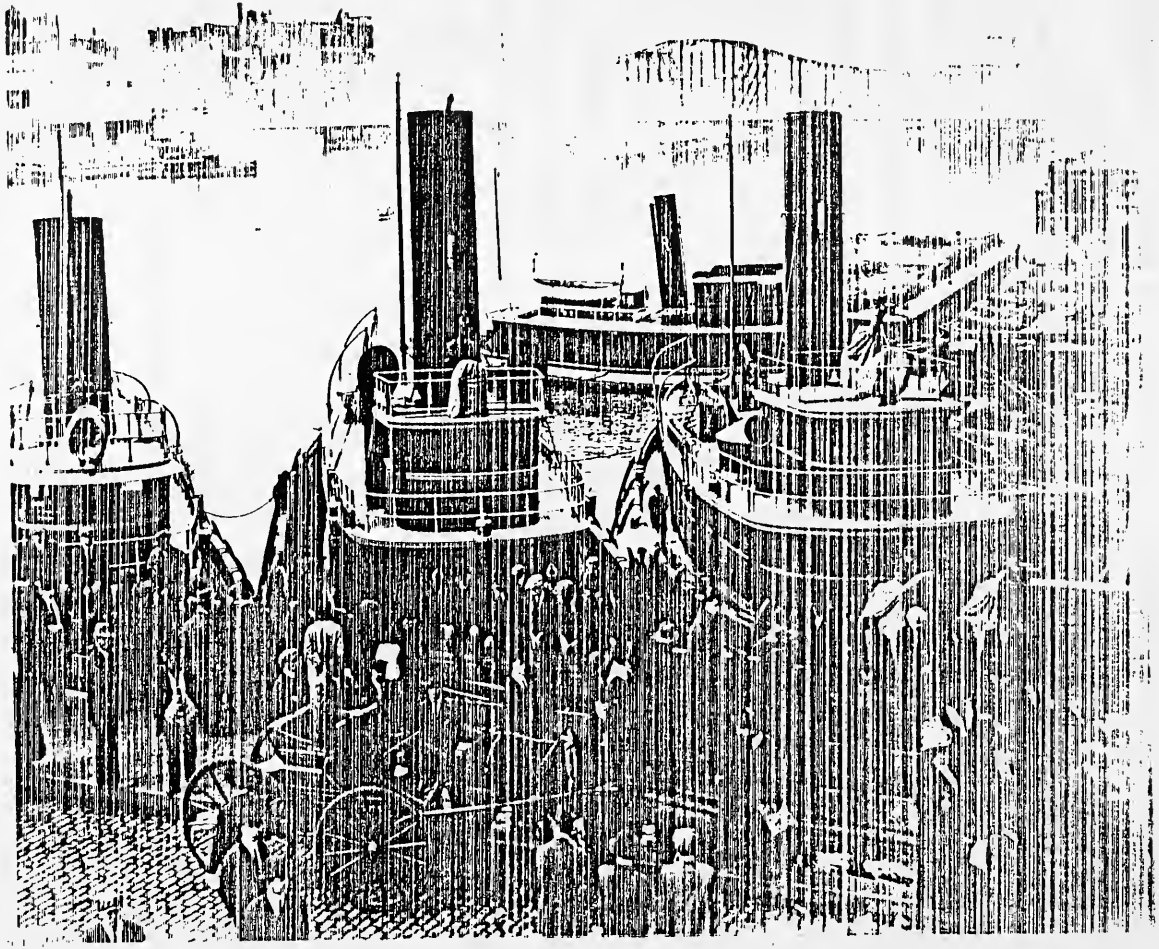
also known as the Dover/West Fourth Street, was opened as a fixed span/draw-bridge in 1805, the first of nine bridges to span the South Bay.

In 1805, the Front Street Corporation began land-fill operations in South Cove, beginning the expansion of Boston Neck. In 1833, the South Cove Associates continued development of the South Cove by filling 75 acres of mud flats for a large railroad terminus for the Boston and Worcester railroads. The western shore of the Cove was substantially completed by mid century.

In 1836, the Boston Wharf Company began its series of land fill operations along the east bank of the South Cove, between Dorchester and Northern Avenues. By the 1870's their reclamation had narrowed the waterway and established the eastern bank of a channel. Around 1870, dredging operations began in the Channel itself, to accomodate the larger vessels berthing in Boston. By 1890 the Boston Wharf Company filling operations were completed, and the Channel was protected by a seawall. The company had continually constructed docking facilities and warehouses and streets to serve their thriving industrial development.

"Boston by the late 19th century, was laced with a complex network of channels, canals and river entrances. The intersection of these busy waterways with an expanding road network developed on filled land created the need for scores of moveable bridges throughout the city. Travel in almost any direction from center of the city was often interrupted by the operation of these devices, which were a common feature of the waterfront. By the early 20th century eight such bridges crossed over Fort Point Channel to serve new development in South Boston. The importance of these structures can be judged by the fact that during the 1890's, nearly 19,000 vessels, steamers, sailing boats and tugs passed through the Congress Street Bridge carrying cotton, molasses, spices, wood, dye, fruit, shoes, and cattle, among other cargo. The seven which remain today include:

Dover/West Fourth St. -- The earliest bridge route to South Boston was



Boats at Fort Point Channel, ca. 1900. Congress St. in

first built in 1805. It was rebuilt again in 1858 and the present structure dates back to 1876; it consisted of a fixed span and a simple drawbridge. Today, only the fixed portion remains.

Broadway-- first built in 1871, later replaced by a swing bridge in 1914.

Old Colony RR -- an 1886 drawbridge, later replaced by the rolling bascule bridge now servicing South Station.

Dorchester Avenue -- originally a retractible bridge, now fixed in place and owned by the US Postal Service.

Summer Street -- originally a railroad bridge, replaced in 1898 by a retractible bridge, where the current Summer Street was constructed. The retractible bridge type was a design unique to Boston and used at many locations. Today, only 2 remain: at Summer Street, which has been fixed in place, and further along the same route at L Street in South Boston, which still operates.

Congress Street -- a single leaf bascule bridge, built in 1930 to replace an earlier draw bridge. The current structure contains elegant light standards; its counterweight still hangs poised over Congress Street, although the bridge has been fixed.

Northern Avenue-- a 1908 swing bridge of steel and concrete; the last route across the channel to be opened to traffic! [1]

Much of the South Bay remained open below the East Fourth Street bridge until the 1920's. The South End/Albany Street bank had been wharfed out in the 1880's and 1890's. These docks handled lumber, coal, and general building materials, and later on ice and small sugar concerns until the 1940's.

Across the Bay filling operations continued. The mud flats west of Dorchester Avenue and north of Southampton Street were reclaimed largely by the early 1920's for railroad yards. Still the Y-shaped waterway to the head of the Roxbury Canal and Dorchester Creek remained open until the 1950's.

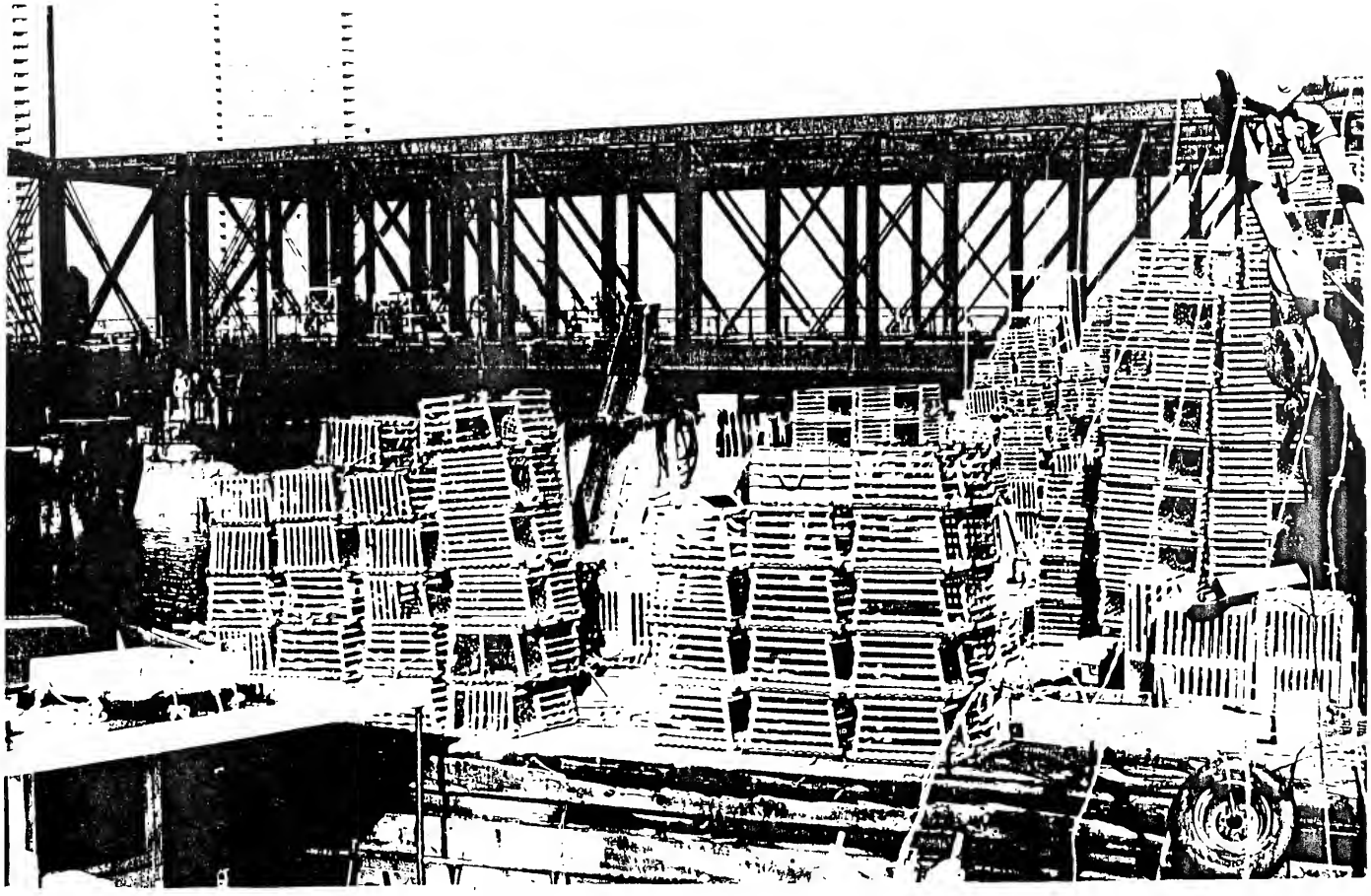
Moveable bridges are often used for bridges and highways to accommodate navigation traffic in the waterways crossed. The three types which are found in the Fort Point Channel are:

1. A swing bridge consists of a super structure arranged to turn about the vertical axis of a pivot anchored to the center pier. Usually the pivot is at the center of a span of two equal arms which balance each other when the bridge is open thus providing two equal openings for navigation. There are three types of swing bridges: center bearing, the entire weight of the open span being supported by the center pivot; rim bearing, the weight being carried by a cylindrical drum, supported by rollers when the span is open; and a combination of these two.

2. Bascule bridge - are those in which one end rises as the other falls, but the term is commonly applied to any type moving about a horizontal axis, either fixed or moving, as well as to those that roll back on a circular segment. They may consist of a single leaf spanning the channel or of two symmetrical leaves meeting at its center. In the latter case the ends that meet must be locked together, to insure the same end deflection of each leaf, when loaded.

3. Retractile or traversing bridges, moving horizontally. When closed they form simple spans across the channels. Some telescope inside of the adjoining spans; others recede above the approaches in some cases the approach span is first moved aside, transversely, to permit the draw span to recede in its place. Sometimes the bridge moves back diagonally, as in the spans of Summer Street over the Fort Point and L Street Channels. The large amounts of power and time required have tended to make retractiles obsolete.

NORTHERN AVENUE DRAW



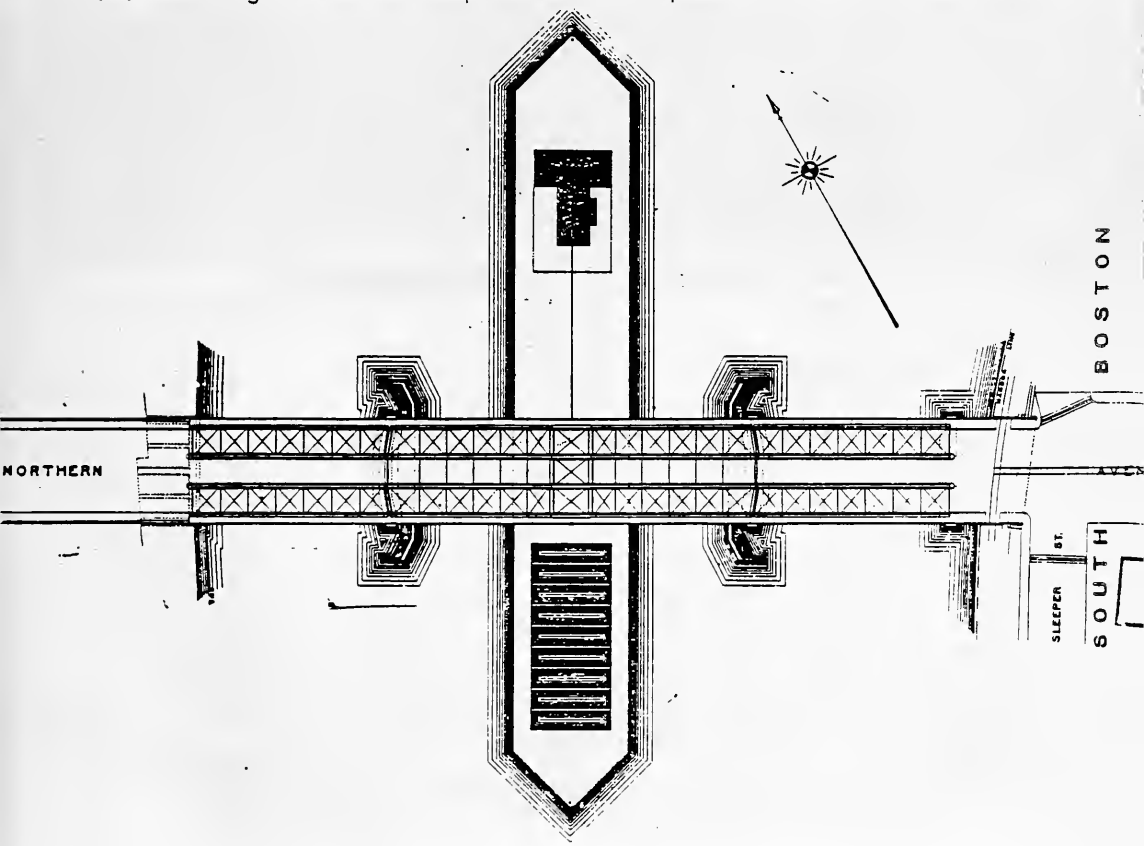
OLD NORTHERN AVENUE

NORTHERN AVENUE RIM BEARING SWING BRIDGE

The Northern Avenue Bridge which is still operated infrequently on its original compressed air system, is one of three surviving swing bridges in Boston.

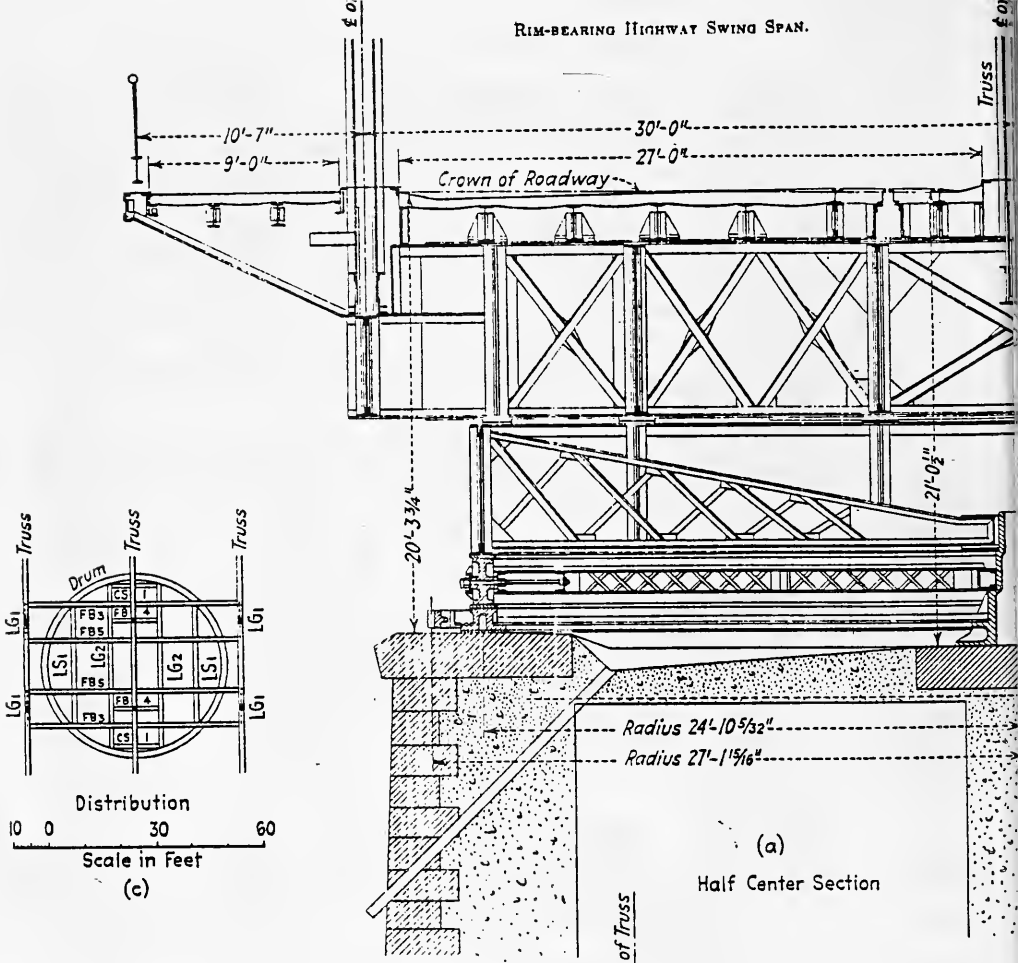
The bridge was the result of nearly 40 years of negotiations between the commonwealth, which planned the development of the South Boston Flats; the New York and New England Railroad, which constructed an ocean freight terminal and railroad yards in the vicinity in 1880; the Boston Wharf Company; and the City of Boston. With the construction of the original Commonwealth Pier between 1897 and 1903, the case for the bridge became paramount, culminating in a mandatory act of the legislature passed in May 1903, directing the city to construct the bridge.

Work was begun on the piers and abutments of the bridge in September 1905, and the bridge was so far completed as to be opened for traffic October 1908.



The bridge is 80 feet in width, encompassing between four sets of pin-connected trusses, two sidewalks, two roadways, and a center lane reserved for a double-track freight railroad. The swing span, 283 feet in length, is made long, supported on the four central tower posts of the inside trusses. These posts carry the load to a circular drum, 40 feet in diameter, which in turn is supported by 56 steel wheels running on a track along the rim of the Granite Island Pier.

RIM-BEARING HIGHWAY SWING SPAN.



(a)

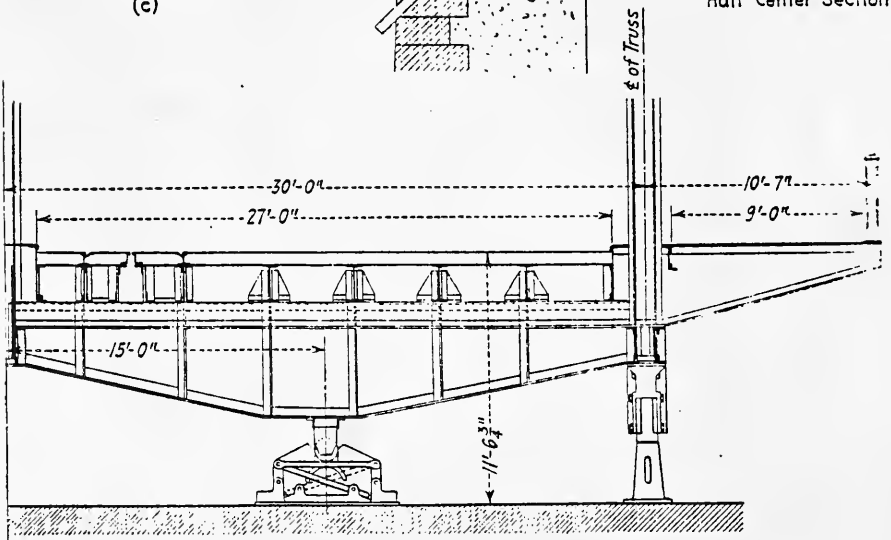
Half Center Section

Distribution

10 0 30 60

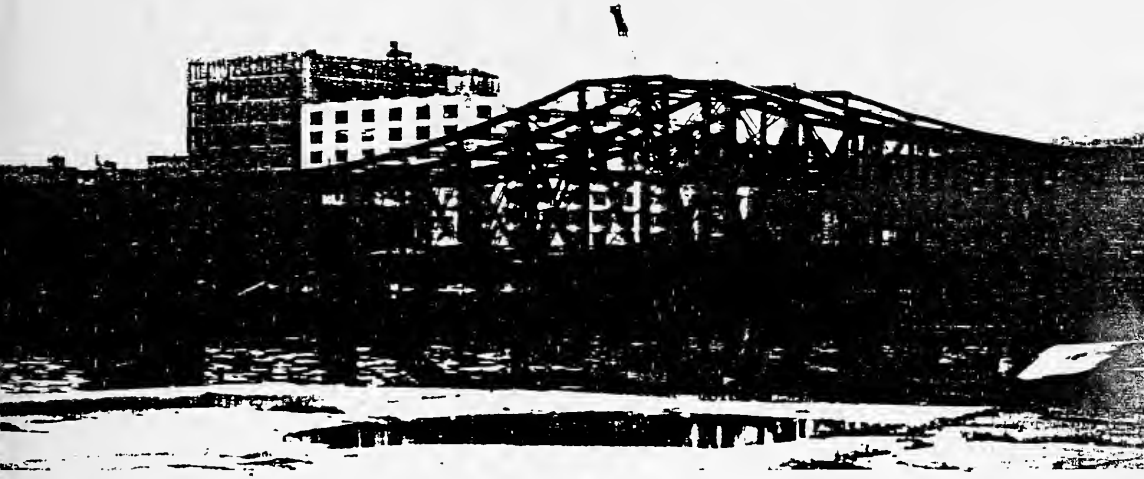
Scale in Feet

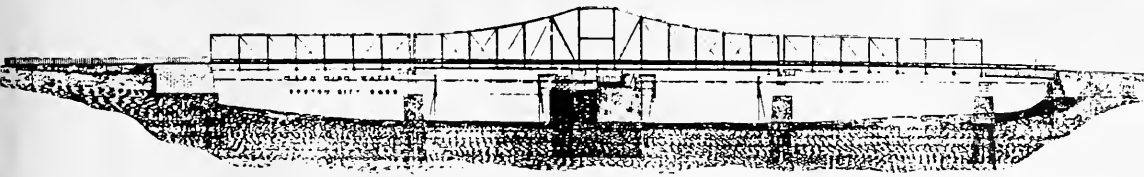
(c)

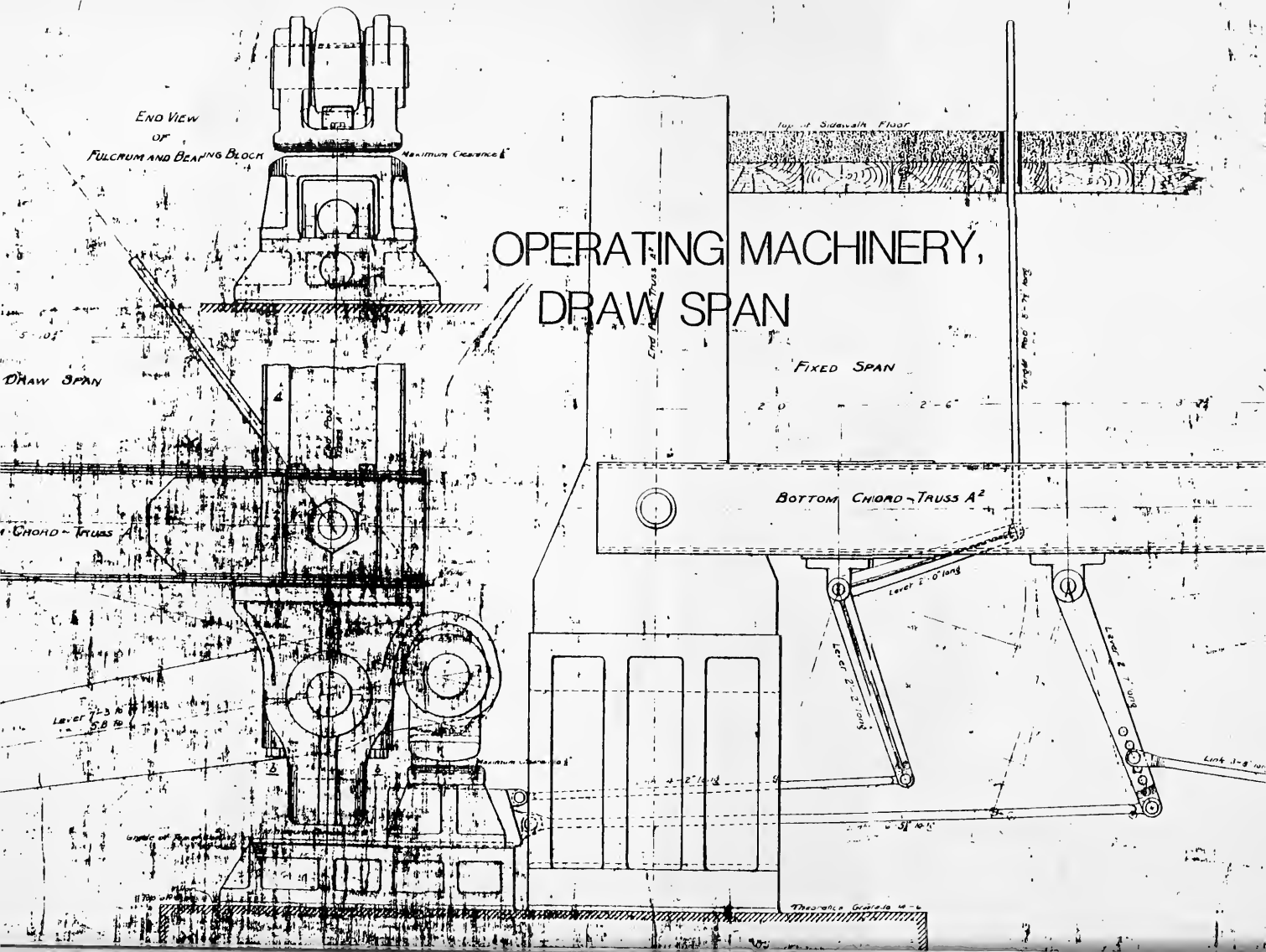


(b)

Half End Elevation







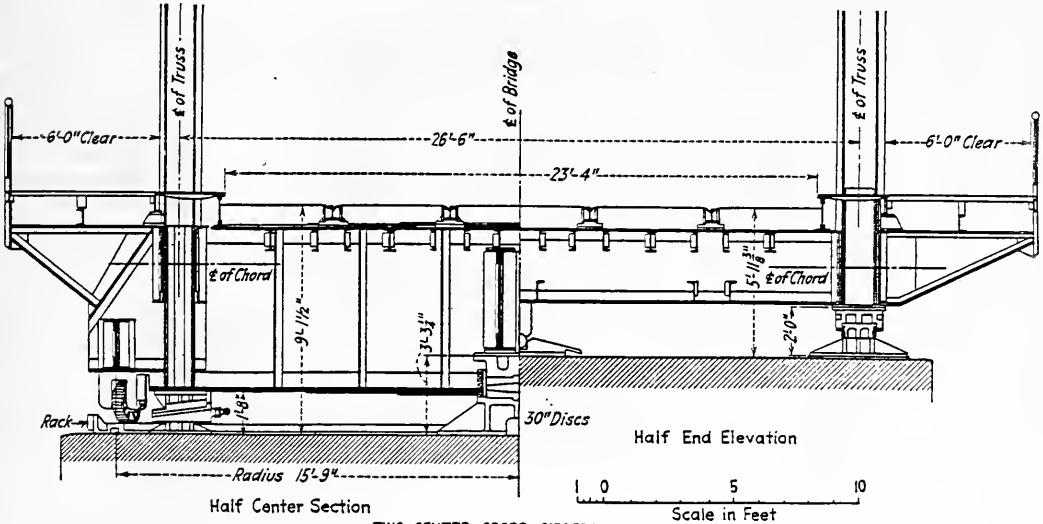
OPERATING MACHINERY, DRAW SPAN

BROADWAY CENTER BEARING SWING BRIDGE

The original Broadway Bridge over the channel was constructed by the Moseley Iron Bridge Company of Hyde Park. Its drawspan, one of five sections in the 1100 foot structure, was supported by sixteen iron screw piles. Within a year of the Bridge's completion, the screw piles settled unevenly, causing distortion and disarrangement of the entire Bridge. After the failure of the Moseley Company and the appointment of a new Chief City Engineer; a replacement swing span was constructed five years later by the Watson Manufacturing Company of Paterson.

The present span, 210 feet long and 60 feet wide was constructed in 1914 by the Boston Bridge Works. Its super structure consists of two riveted trusses on either side of a roadway designed for two lanes of team travel and two tracks for the surface cars of the Boston Elevated Railway. The weight of the Bridge's 800 ton draw is carried by a phosphor bronze disc, 26 inches in diameter, placed between two hardened steel discs. Six trucks, running on a track 40 feet in diameter, keep the draw balanced, and the track in turn is supported on a circular steel drum of similar diameter. Two 20 h.p. electric motors on the underside of the draw engaged a rack on the drum in order to turn the span, exposing a 50' navigable channel.

CENTER-BEARING HIGHWAY SWING SPAN.



TWO CENTER GROSS GIRDERS.

J. O. HENSHAW, SECY.

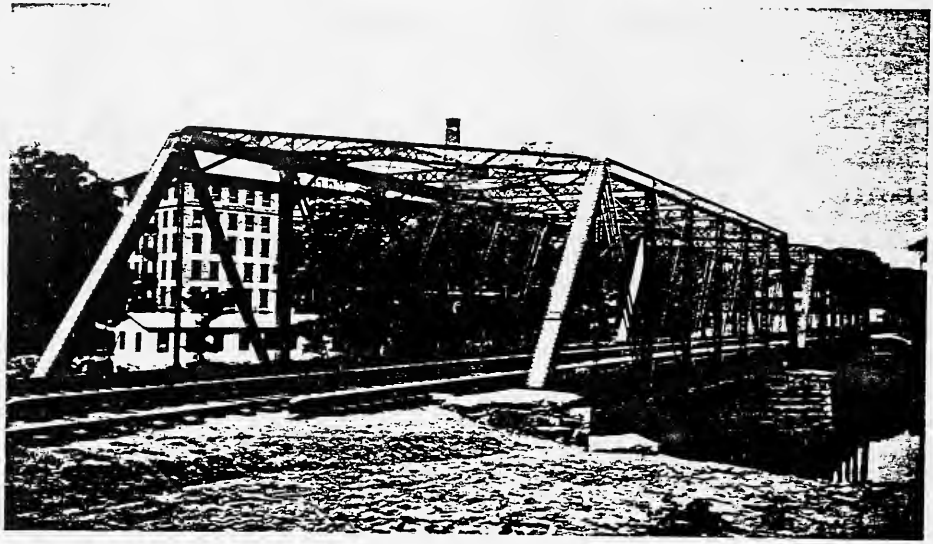
BOSTON BRIDGE WORKS

13 PEMBERTON SQUARE.

D. H. ANDREWS, PROPRIETOR.

J. R. WORCESTER, ENGR.

BRIDGES, ROOFS, GIRDERS.



DRAW BRIDGES, VIADUCTS, TURN TABLES.

Blackstone River Bridge Prov. & Wor. R.R. 115 ft. Spans.

Structures built by us, nearly all of which are from our own designs.

Cheapside Bridge, over Deerfield River, for Connecticut River R. R.,	Length 710 feet
Connecticut River Bridge, Double Track, for Fitchburg R. R.,	" 650 feet
Blackstone River Bridge, Double Track, for Providence & Worcester R. R.,	" 230 feet
Canal Bridge, Lowell, Mass., Three Tracks, Boston & Lowell R. R.,	Span 160 feet
Cocheco River Bridge, Double Track, Boston & Maine R. R.,	" 160 feet
Fitchburg and Boston & Lowell R. R., crossing Somerville, Three Tracks, F. & B. & L. R. R's,	" 112 feet
Biddeford Bridges, Double Track, Boston & Maine R. R.,	Spans, 120, 104, 124 feet
High Viaducts, height 61 feet, Manchester & Keene R. R.,	Total length 1075 feet
Seakonk River Bridge, with 215 feet draw, City of Providence,	Total length, 1250 feet
Broadway Bridge, City of Boston,	Width 60 feet, span 155 feet
Groveland Bridge, with 168 feet draw, over Merrimack River,	Total length, 800 feet
Deer Island Bridge, with draw 154 feet over Merrimack River,	Total length, 404 feet

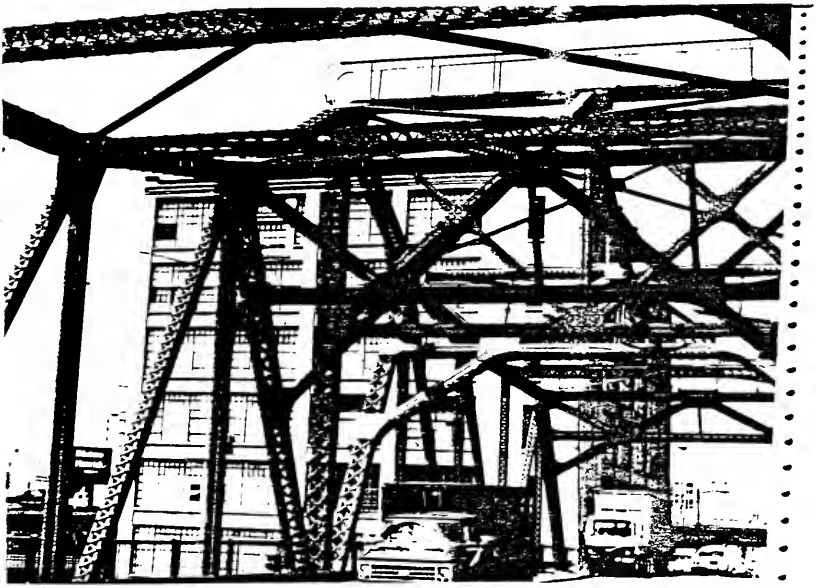
AND MANY OTHERS OF VARIOUS DIMENSIONS.

Also, many large Iron Roofs, of which the New England Manufacturers Institute Building, Boston, covering five acres, and containing 850 tons of iron truss work, is a fair example.

In addition to our regular bridge work, we have manufactured a large number of superior wrought-iron Turn-tables which are now in satisfactory use on many of the leading railroads of the country, of which the following may be named: Boston & Albany R. R., Baltimore & Ohio R. R., Atlantic & Pacific R. R., Atchison, Topeka & Santa Fe R. R., Mexican Central R. R., Chicago, Rock Island & Pacific R. R., Cincinnati Southern R. R.

Yours respectfully,

BOSTON BRIDGE WORKS.



BROADWAY BRIDGE

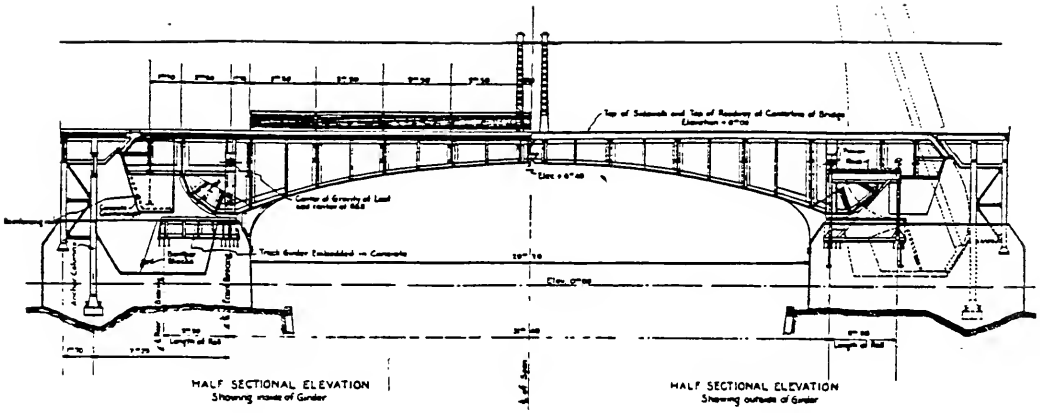
Scherzer Rolling-Lift Bridges

In 1893, William Scherzer was retained by the Metropolitan West Side Elevated Railroad Company of Chicago to design a four track draw bridge across the Chicago River. He developed and patented the Scherzer rolling lift bridge which has been widely used because of its simplicity and small power requirement.

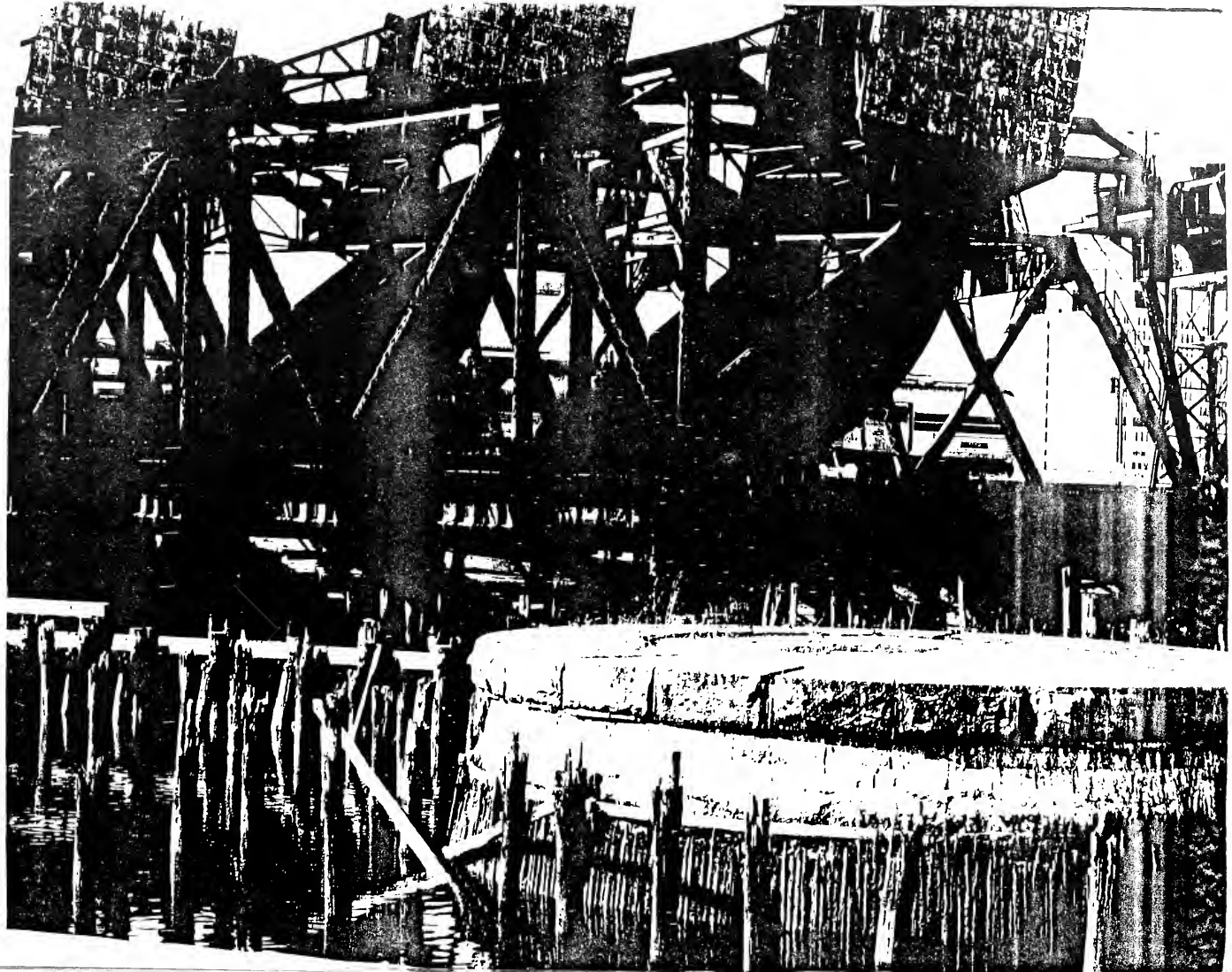
The leaf extending over the channel is continued shoreward, in the form of a circular quadrant, which carries the counterweight; and in operation, the entire structure moves shoreward on the quadrant, which rolls on a horizontal track, usually in the form of a heavy girder. The track is provided with teeth meshing in openings in the bottom of the quadrant girder, to insure certainty of operation and accuracy in registration when closing. When opened, the bridge recedes from the channel, the span is shortened, and the necessary angular movement is reduced. Rolling friction is substituted for that of trunnions turning in _____ bearings, with consequent reduction in resistance to motion. When the leaf is open, the large vertical area exposed to wind pressure requires additional power to hold it steady.

COURTESY T. G. PIHLFELDT

PLATE 206. Michigan Avenue Bascule Bridge, Chicago. Designed by the City of Chicago Bureau of Engineering. *H. E. Young, Engineer of Bridge Design; T. G. Pihlfeldt, Engineer of Bridges.*



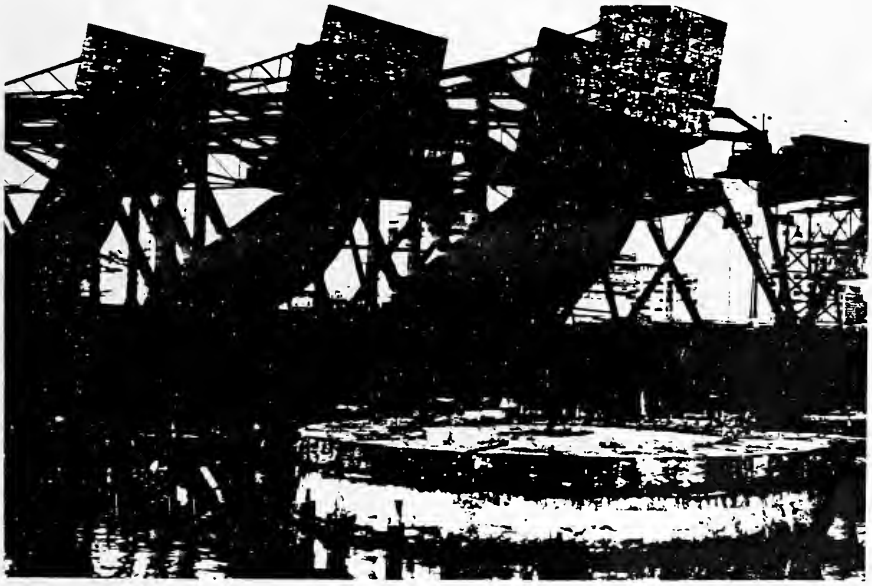
Bascule at North Station

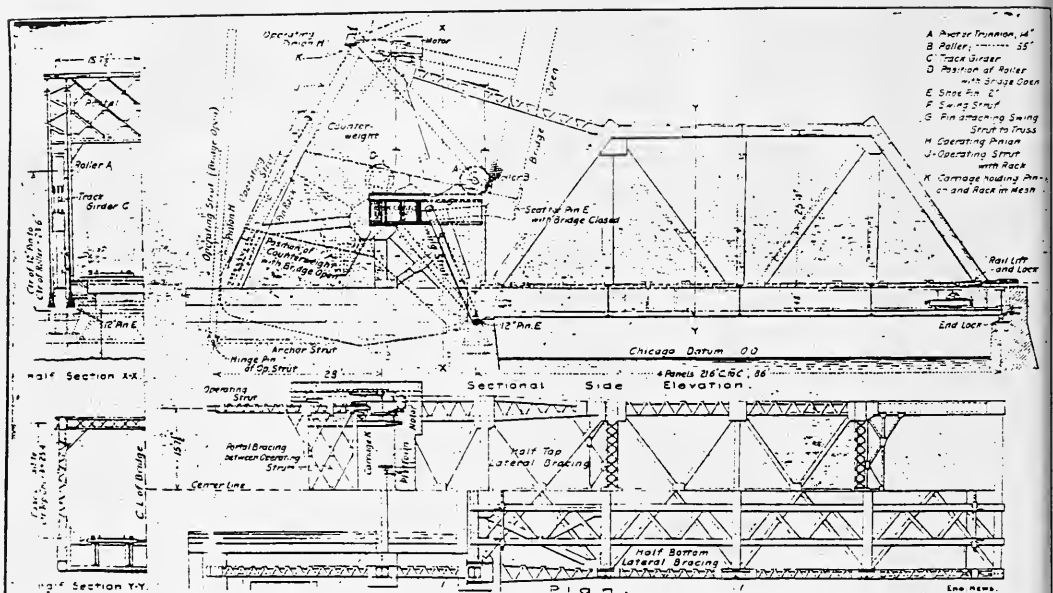


RAILROAD TRACKS AT FORT POINT CHANNEL

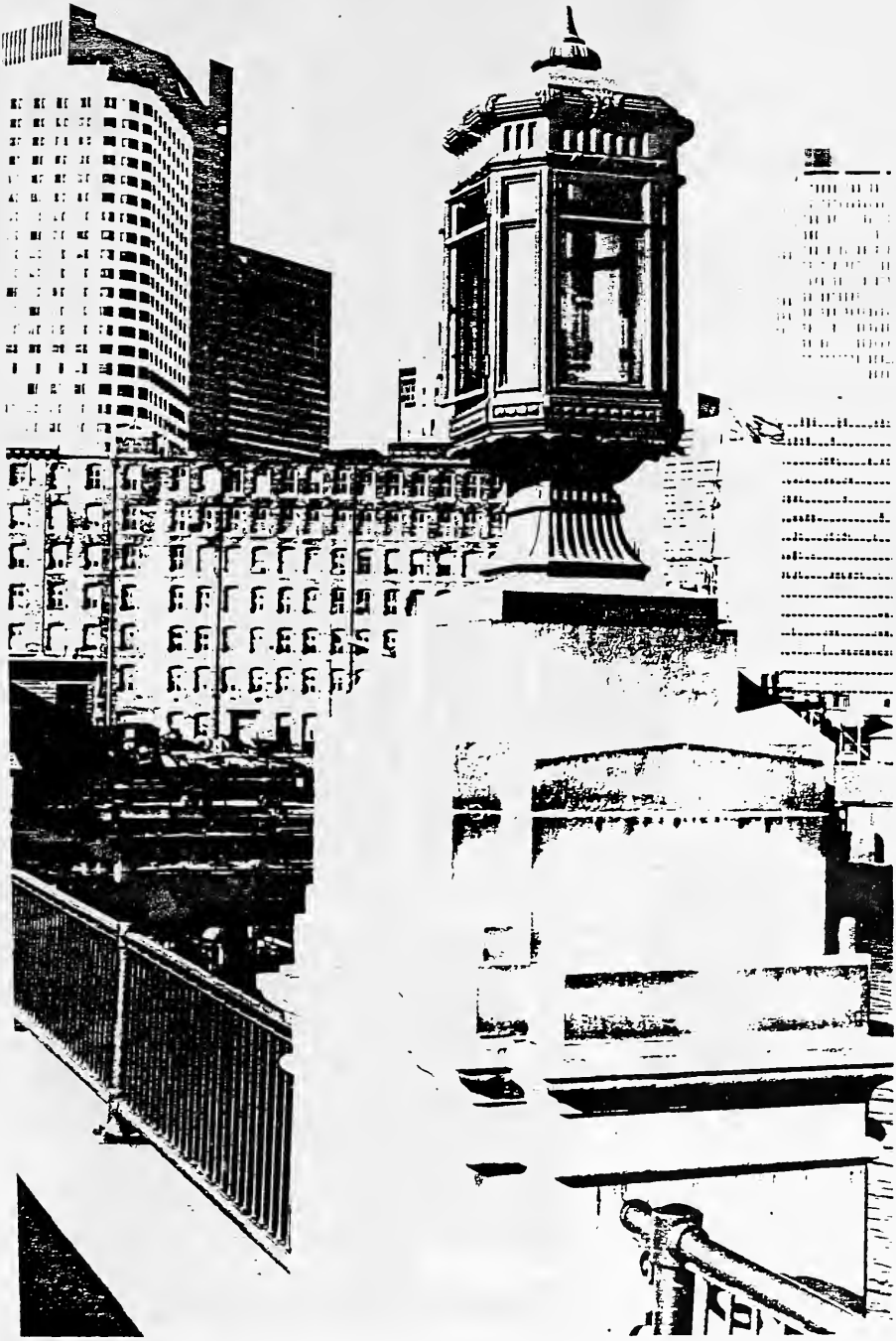
From the Summer Street alignment, the new arrangements at South Station moved the railroad's crossing of Fort Point Channel 900 yards to the south, where it paralleled the route of the Old Colony Railroad. Here a new six-track moveable bridge was built to carry both lines. It was a Scherzer rolling lift bascule type whose leaf moves back as it rises on large rockers.

The six-track bridge is made up of three double-track through riveted truss spans. As the bridge is sharply skewed to the direction of the 42 foot channel, the trusses of each span are of unequal length, ranging from 83 to 113 feet. Each draw span, weighing approximately 500 tons, could be raised and lowered independently of the other two and is revolved 80° in a vertical plane. The rolling segment of a circle 52 feet in diameter. Shoe plates attached to the segment have rectangular holes through them to engage teeth cast on the top of the horizontal track plates. These prevent the span from slipping and act as guides when the span is being revolved each leaf was independently worked by a 50 h.p. Westinghouse Railroad-type motor on a platform 30 feet above the level of the tracks. Through a rack and pinion arrangement, each motor drove a 60 foot operating strut back and forth, raising or lowering the leaf through a pin connection at the top end of the truss. The time required for opening or closing each span was usually 30 seconds.

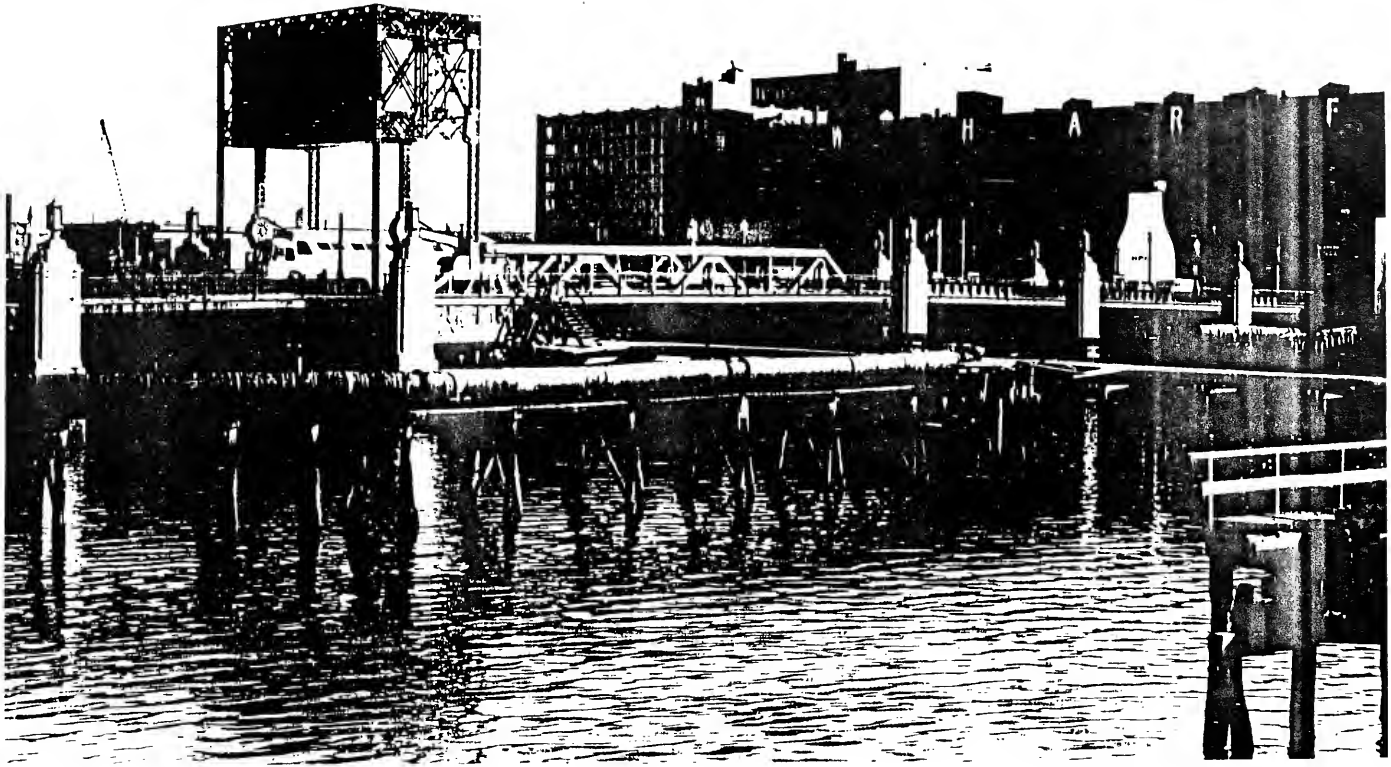




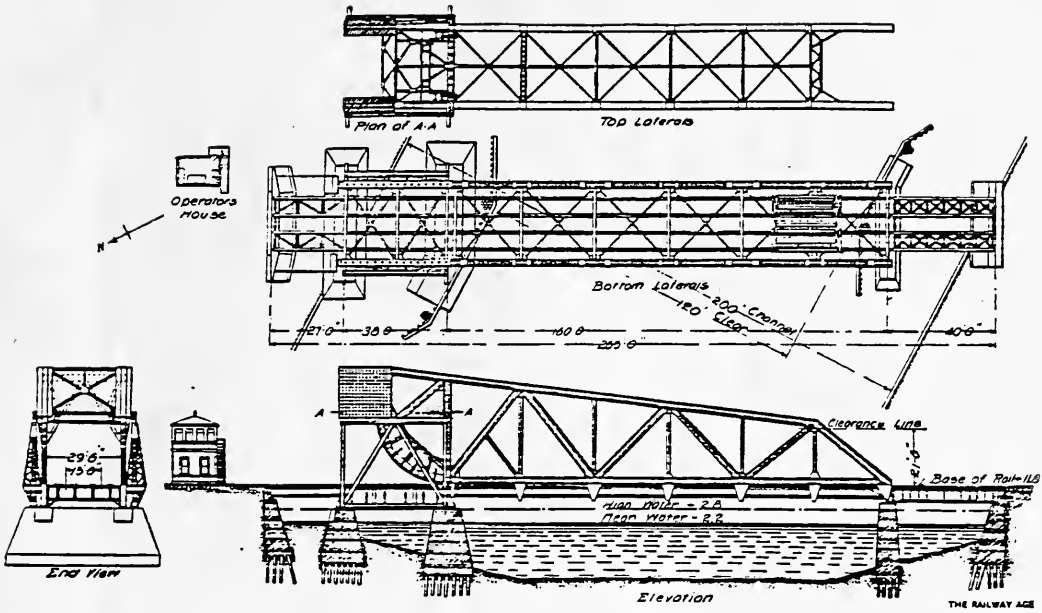
DOUBLE-TRACK RAILWAY BASCULE BRIDGE OF THE RALL TYPE OVER THE EAST CHICAGO CANAL, NEAR INDIANA HARBOR, IND.



CONGRESS STREET

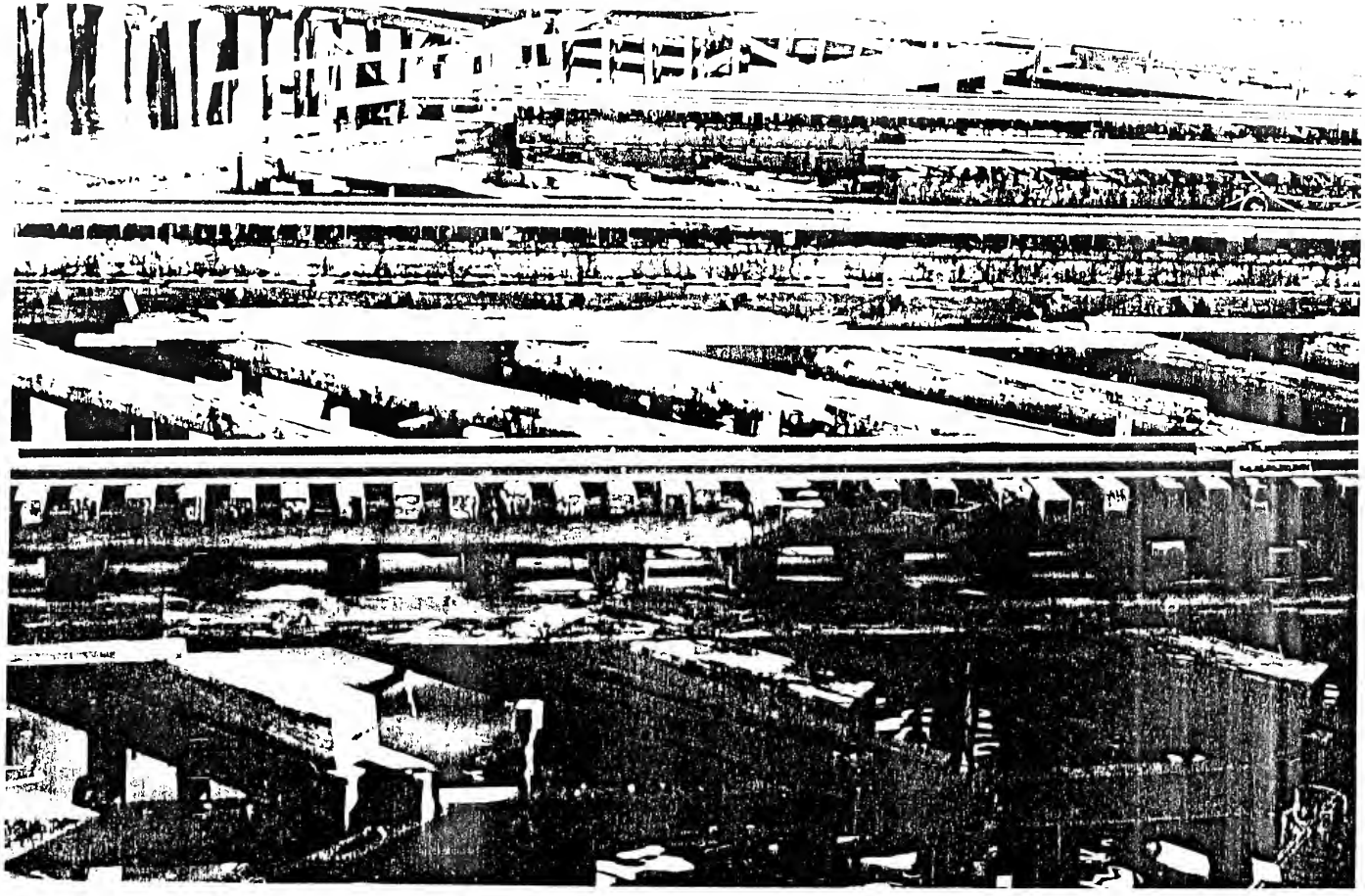


CONGRESS STREET

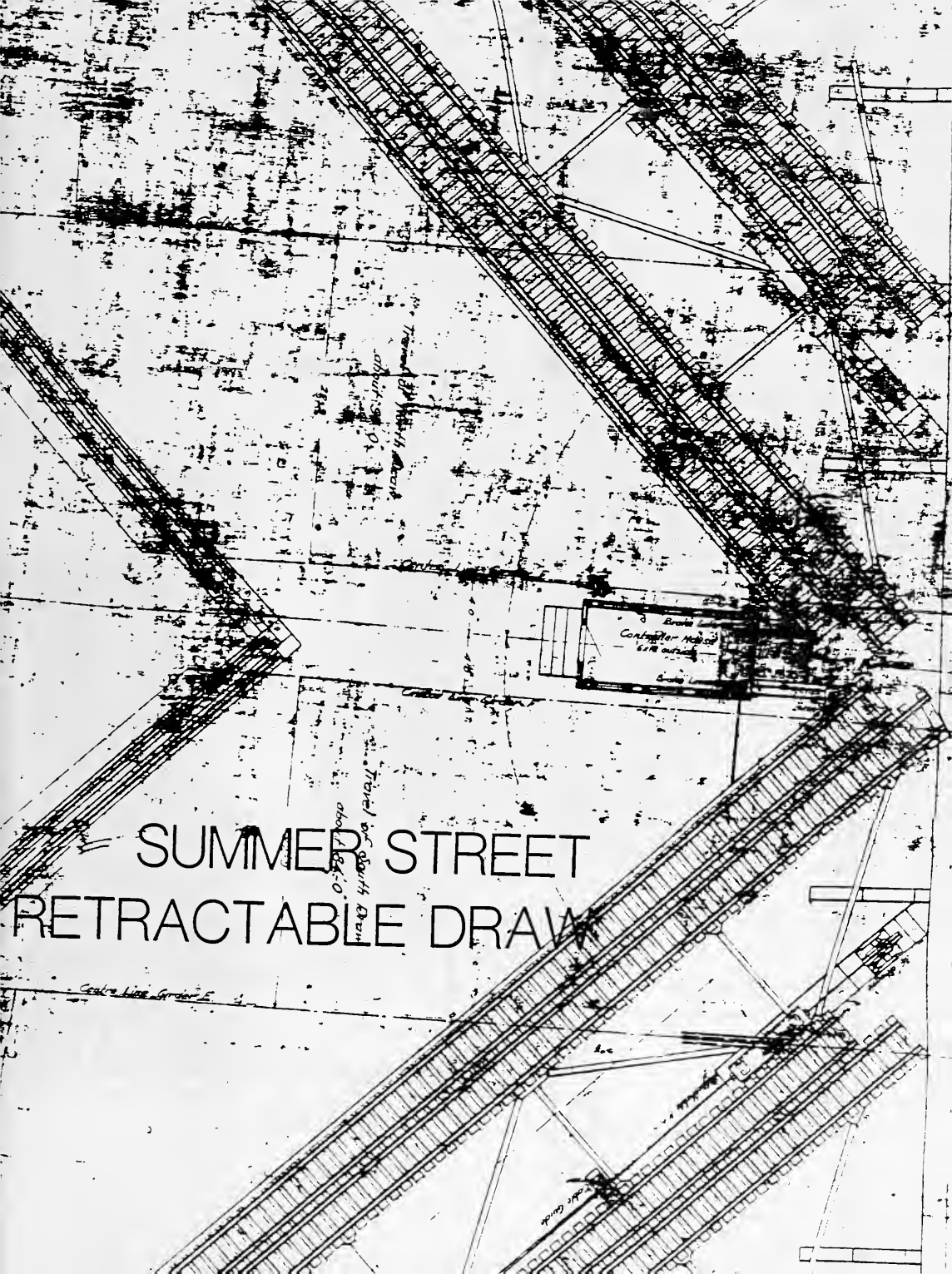


CONGRESS STREET TRUNNION BASCULE

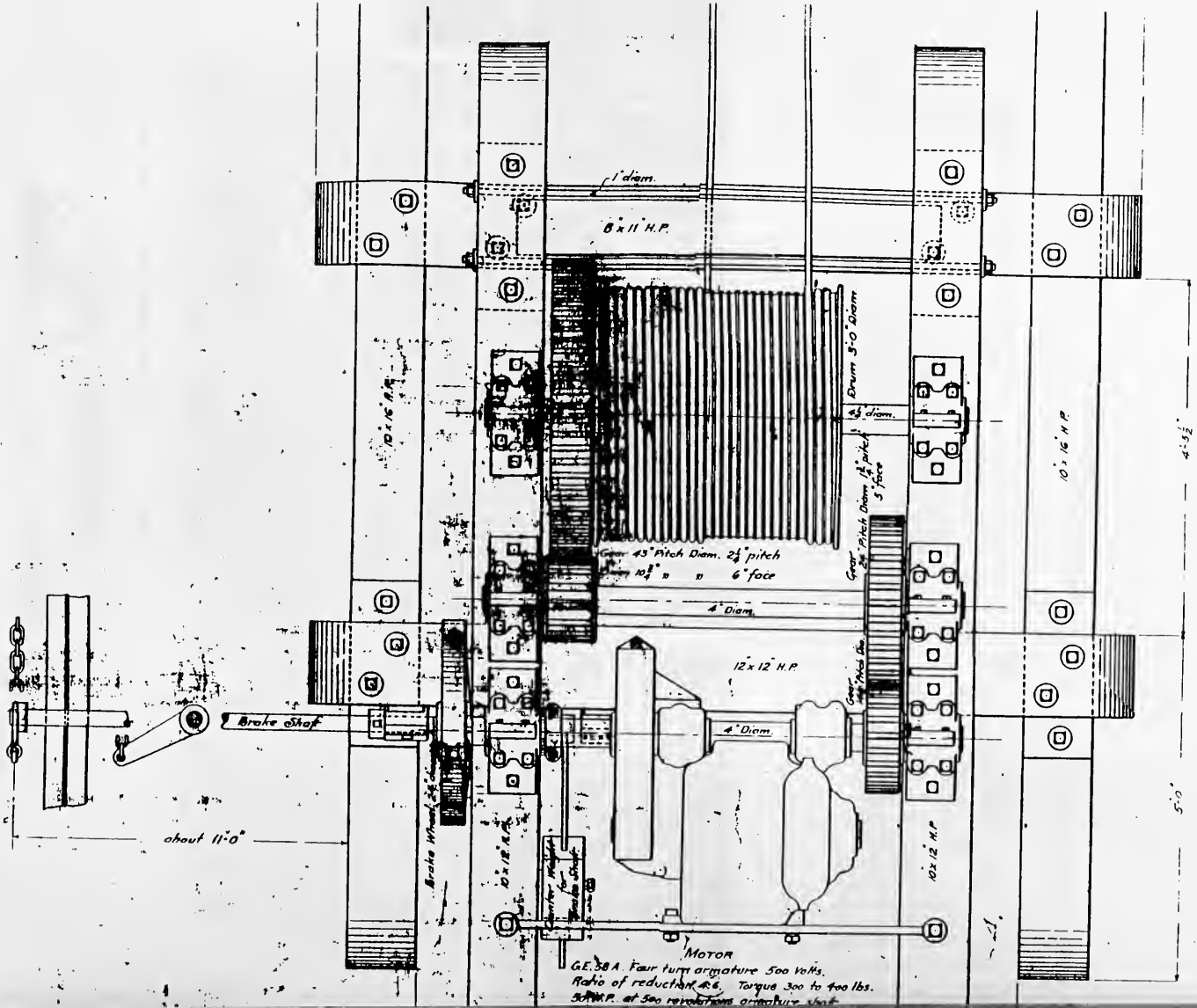
The earliest route connecting the Boston Wharf property with downtown Boston was the Congress Street Bridge erected in 1878. Congress Street, originally Eastern Avenue was laid out across the mud flats and in 1892 crossed the reserved channel on what is today the L Street Bridge. Although the street was terminated at the yards in the 1890's, the development of Boston Wharf property continued to accelerate. Even after construction of the Summer Street Bridge, the Congress Street Bridge was crossed by more teams daily because of the easier gradient. The original Congress Street Bridge, a steam operated steel swing draw span, was not replaced until 1930, when the present bridge was constructed. The new bascule draw was an electrically operated pivot type which furnished a 75 foot wide channel.

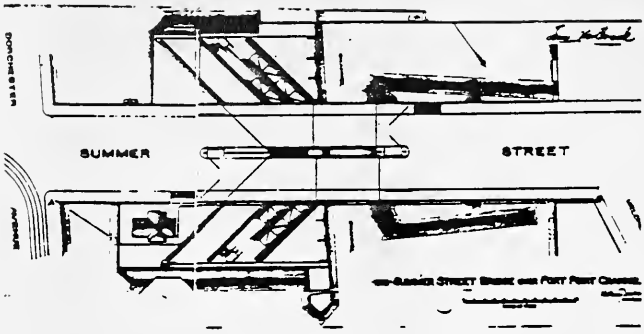


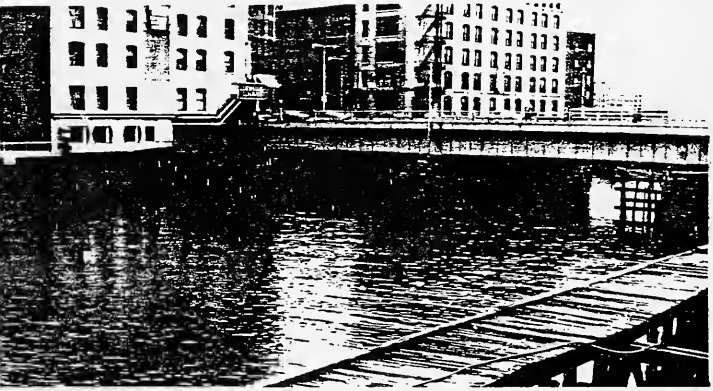
SUMMER STREET

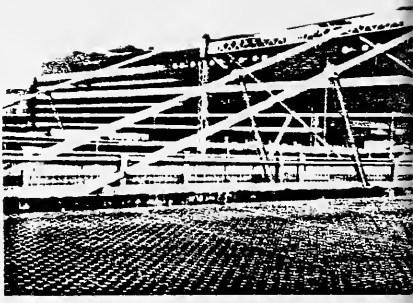

SUMMER STREET
RETRACTABLE DRAW

Summer Street

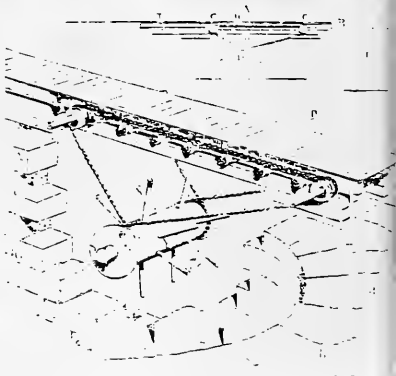

1" diam.
8 x 11 H.P.
10 x 16 H.P.
Drum 3'-0" diam.
4½" diam.
10 x 16 H.P.
4'-3½"
Gear 45" Pitch Diam. 2½" pitch
Pinion 10¾" " " 6" face
Gear 24" Pitch Diam 1½" pitch 5" face
4" Diam.
12 x 12 H.P.
Gear 18" Pitch Dia.
4" Diam.
Brake Shaft
about 11'-0"
Brake Wheel 24" diam.
10 x 12 H.P.
Center Weight
Brake Shaft
10 x 12 H.P.
5'-0"
MOTOR
G.E. 58 A. Four turn armature 500 volts.
Ratio of reduction 4.6, Torque 300 to 400 lbs.
50 H.P. at 500 revolutions armature shaft







- Summer Street -- originally a railroad bridge, replaced in 1898 by a retractible bridge, where the current Summer Street was constructed. The retractible bridge type was a design unique to Boston and used at many locations. Today, only 2 remain: at Summer Street, which has been fixed in place, and further along the same route at L Street in South Boston, which still operates.

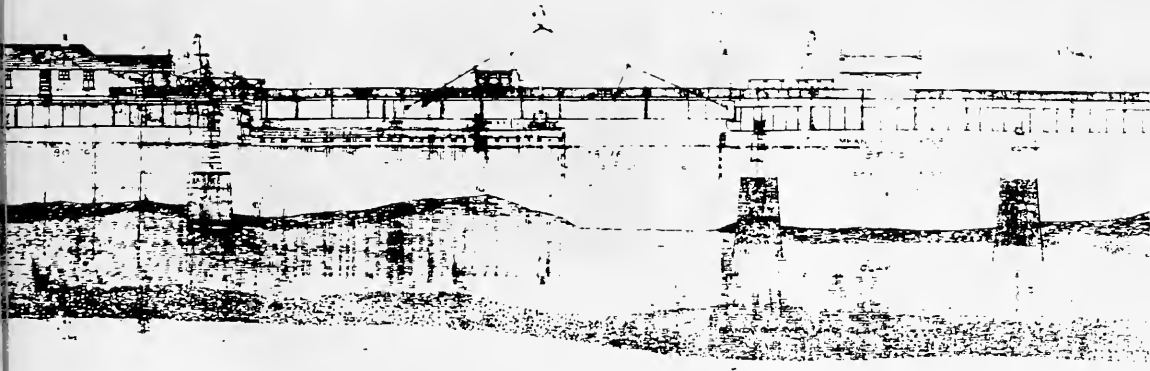


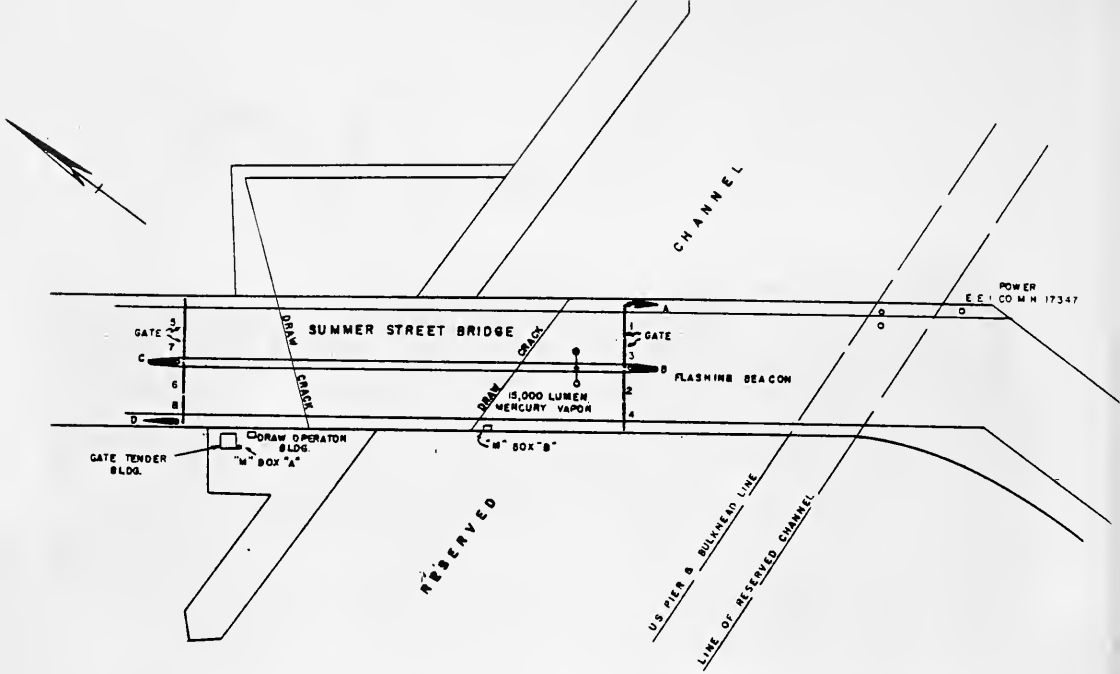
Medieval Retractile Bridge

From a photograph — Frank E. Porter

VIEW OF THE OLD NEW ENGLAND RAILROAD BRIDGE OVER FORT POINT CHANNEL

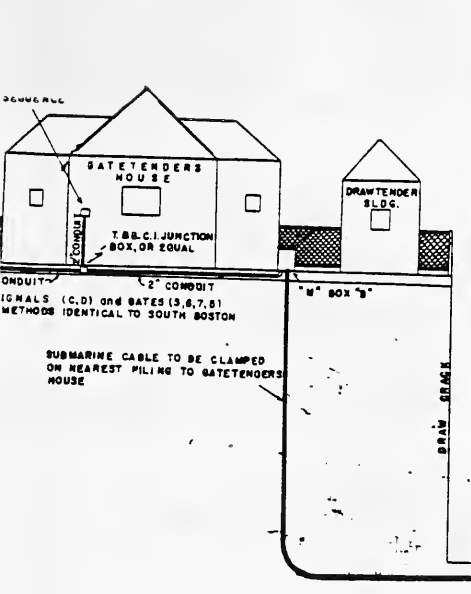
The site of the present Summer Street bridge, taken about 1893 from the top of building at 153 Congress Street looking southeast. The property across Fort Point Channel (in middle background) is part of the property of the Boston Wharf Company. The site of the present South Station is at the right end of the bridge. As many as sixty-four sailing vessels have been seen in the early days tied up to the wharves of this Company. Most of these ships had brought sugar and molasses, there being two large (molasses) distilleries here at that time, carrying on a very large business. It is said that there were as many as 20,000 barrels lying on the wharves, and on hot days the firemen used to come and play cold water on the barrels to keep them from exploding.

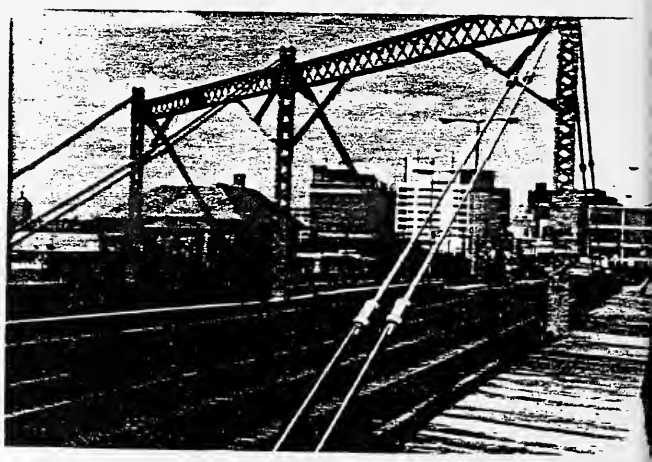




SUMMER STREET OVER RESERVED CHANNEL

RETRACTILE DRAW with 'with KING POST SUPERSTRUCTURE





When draw is opened, the front ends of the cantilevered channel span are carried by suspension rods passing over Samson posts erected at middle of span.

SUBMARINE CABLE - ALLOW ADDITIONAL 20% SLACK
12/C-12 S2-23 TYPE V
REVISED 3-11-58

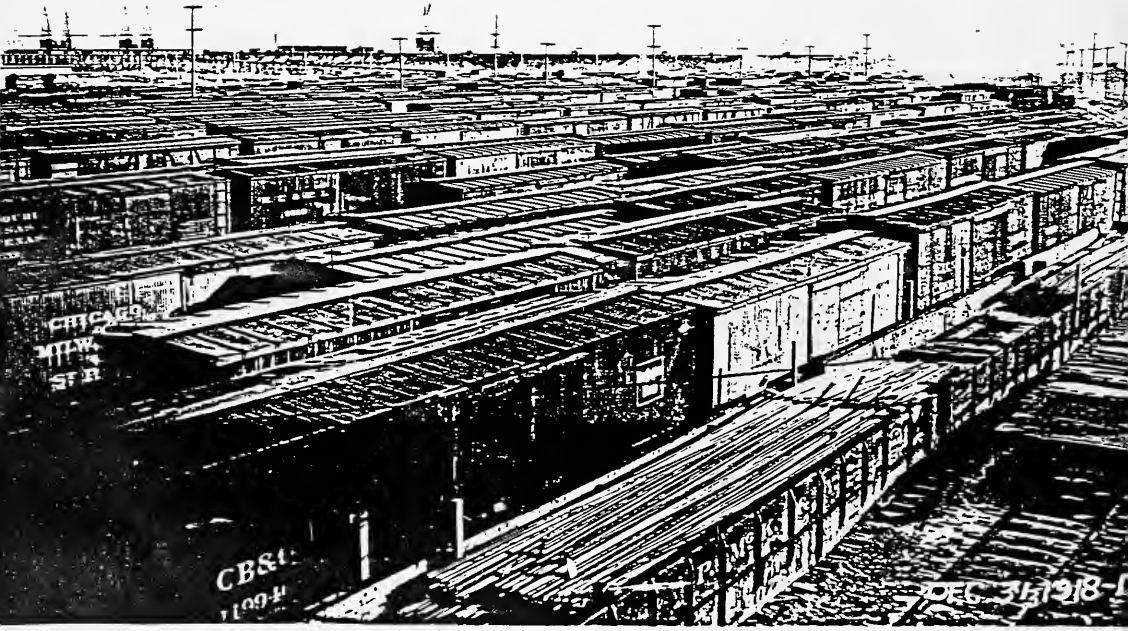
CROSS SECTION OF CHANNEL

THE FIXED SPANS OVER THE RAILROAD YARDS

The area at the turn of the century was a center for rail facilities which had begun operations in the 1840's. The combination of shipping, docks and wharves, and rail facilities supported this area as the heart of Boston's industrial waterfront. At the same time, Boston was losing its pre-eminence as the nation's major harbor, gained during the Clippership Era, to New York. This shift changed Boston from an active mercantile port to a center for steamship lines and railroad ferry terminal. Much of this activity occurred in the banks of the Fort Point Channel.

By 1900, South Station was completed, uniting all southerly railroad lines under one roof. This terminal further contributed to the continued growth of the adjacent leather district and other manufacturing/warehousing activities on both sides of the Channel.

The Channel reached its height of port activity in the early 20th century. Boston's fishing center relocated from the Great Cove piers to South Boston, near the mouth of the Channel. The wool and ice industry had their warehousing and distribution center here as well. A major sugar refinery was located directly on the Channel at its curve. The Boston Wharf Company warehouses served as a distribution center for the sugar molasses concerns as well a lumber, coal, bananas, and leather. South of the wharves grew a manufacturing center. Machinery, iron, glass, brickyards, wagons, soap, elevators and beer were some of the varied products manufactured here, and distributed via the Fort Point Channel rail and shipping facilities.


CHICAGO
CB&
DEC 31 1918

The earliest route connecting the Boston Wharf property with downtown Boston was the Congress Street Bridge, erected in 1878. Congress Street, originally (Easter Avenue), was laid out across the mud flats and in 1892 crossed the Reserved Channel on what is today the L Street Bridge. The presence of the railroad yards however, made this route a hazardous one, and in the 1890's, as part of the general movement to eliminate grade crossings, Congress Street was terminated at the yards.

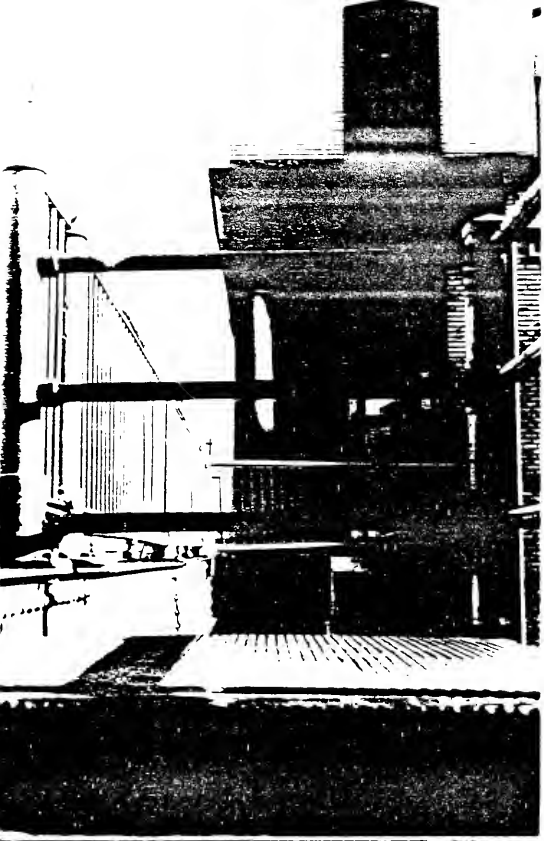
In the meantime, the development of Boston Wharf property set in motion by the Congress Street Bridge had accelerated. By 1900, a solid wall of masonry lined Congress Street as far as the yards.

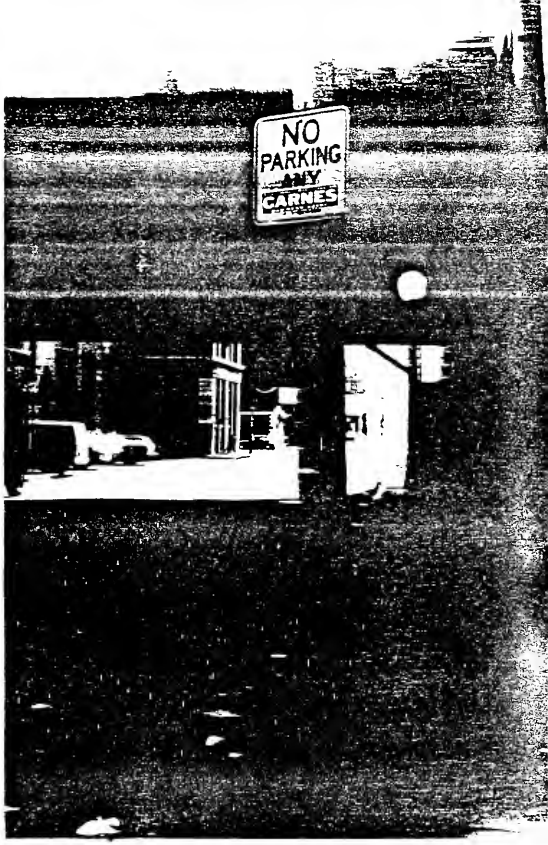
To eliminate the hazardous grade crossing of Congress Street at the railroad yards, the Legislature authorized in 1896 a new route, extending Summer Street across Fort Point Channel. Because of the heavy traffic in teams expected to the state's docks, the route was designed to reduce the grade required to an absolute minimum. A stone and steel viaduct was built by the city from Fort Point Channel over A, B, and C Streets to the edge of the railroad yards. The New England Railroad itself was charged with erecting the bridge over its own lands.

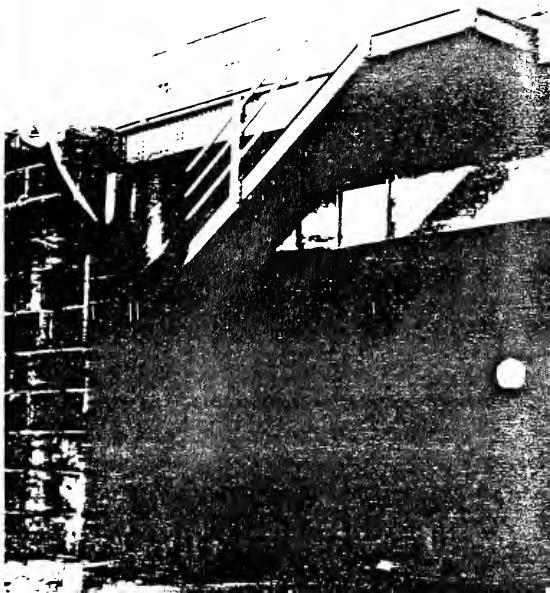
The bridge, completed in 1901, was built by the Edge Moor Branch of the American Bridge Company according to the designs of the railroad's engineering department, William H. Moore, bridge engineer.

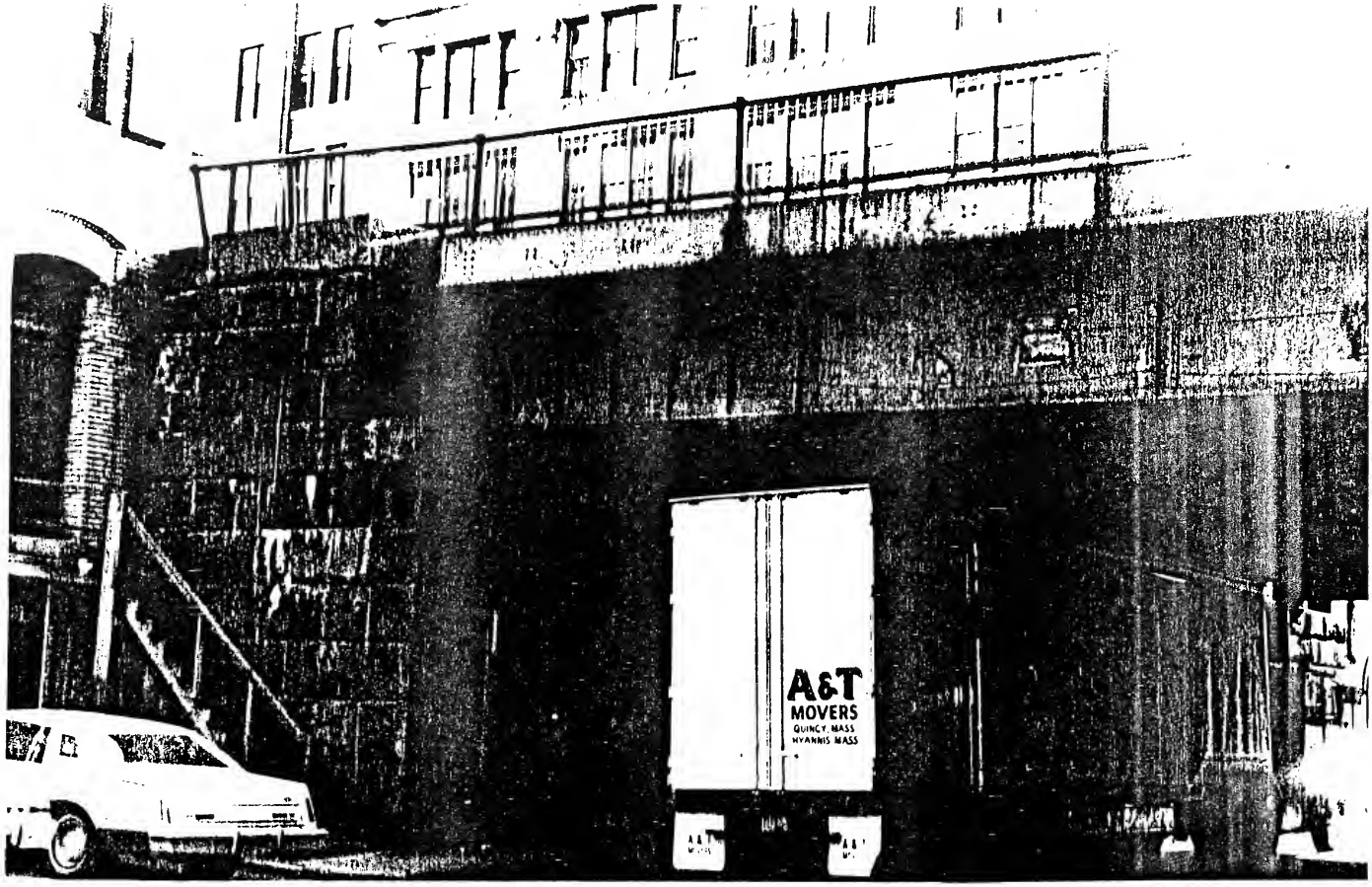
Commonwealth Pier was constructed in 1900 by the Board of Harbor and Land Commissioners and in 1912 a super structure was erected on it consisting of three parallel sheds running its full length of butting into a four story headhouse. Reflecting the separate freight and passenger access, the headhouse consisted of a two story base for freight traffic with a ramp from the Summer Street viaduct providing access to the third floor passenger level. This viaduct functions as a grand axis to the Beaux Arts facade of the headhouse and is accessed by vehicles on its Northern Terminus via Ramp Street.

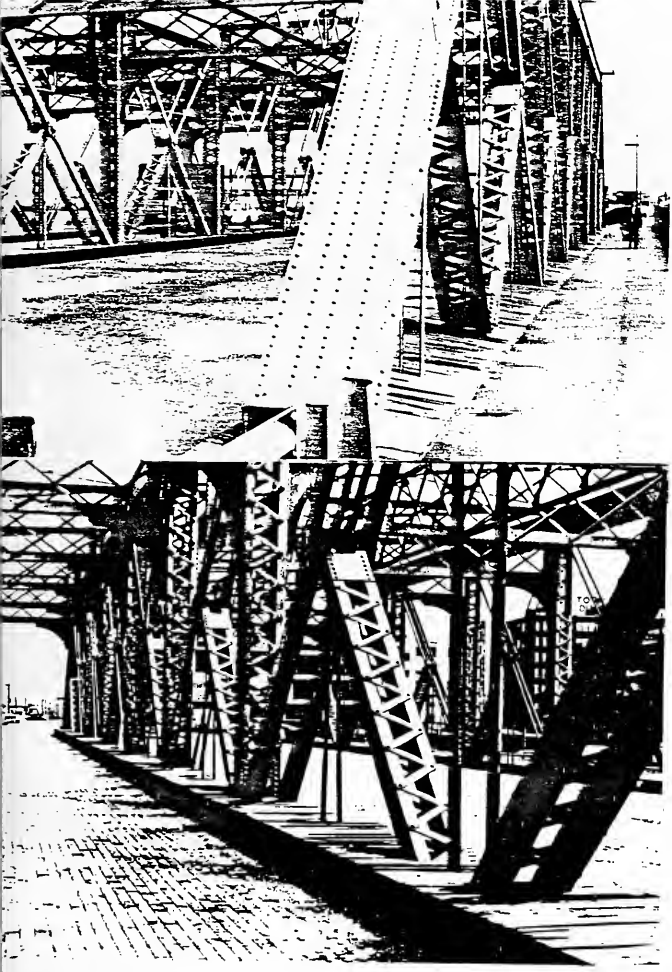
SUMMER OVER A STREET




NO
PARKING
ANY
CARNES



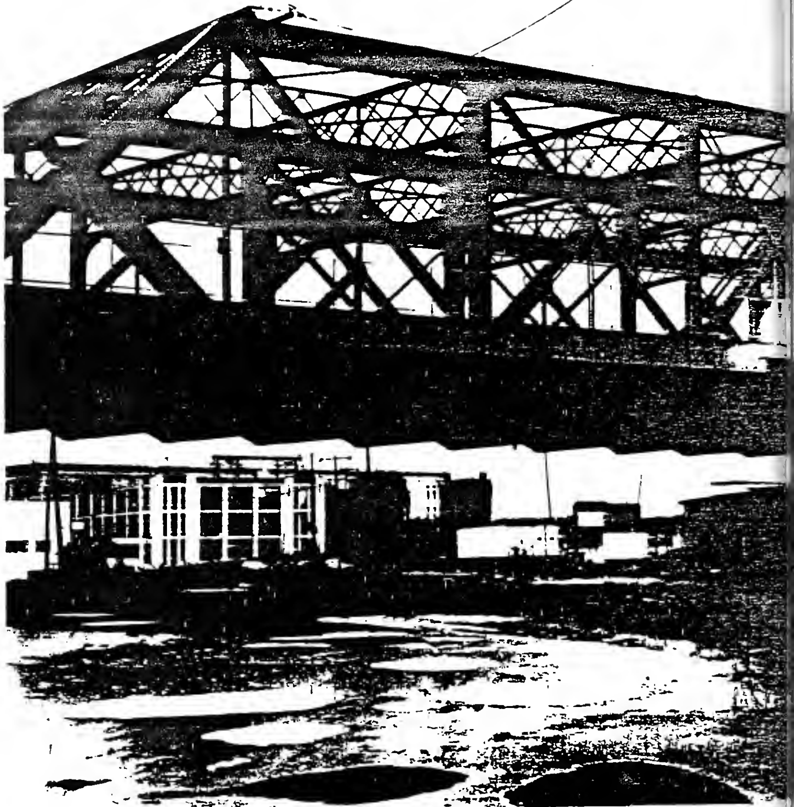

A&T
MOVERS
QUINCY, MASS
HYANNIS MASS

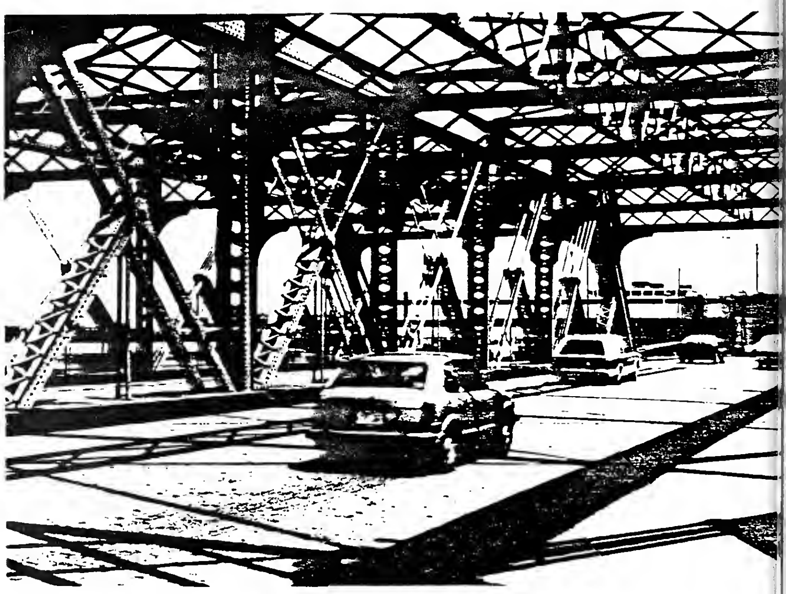


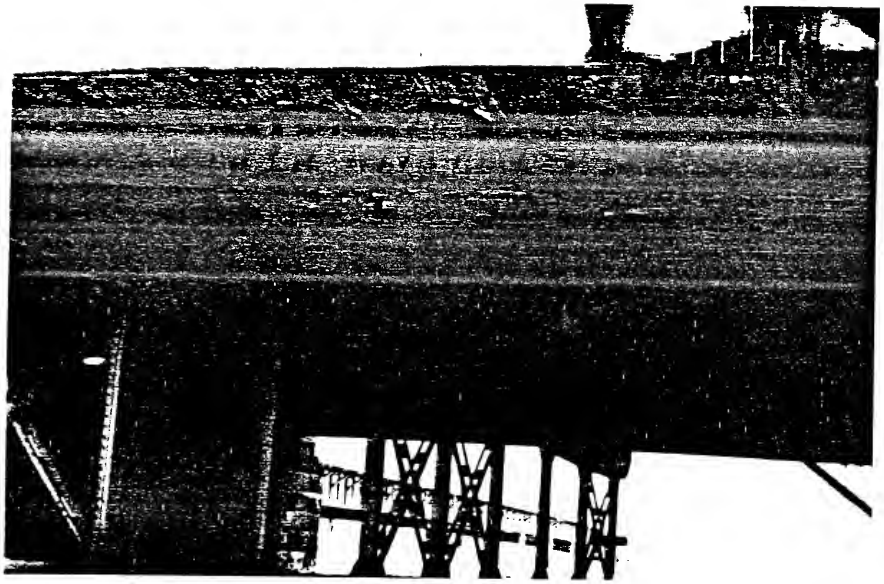
SUMMER STREET OVER RAILROAD

Four span 710' steel Baltimore truss

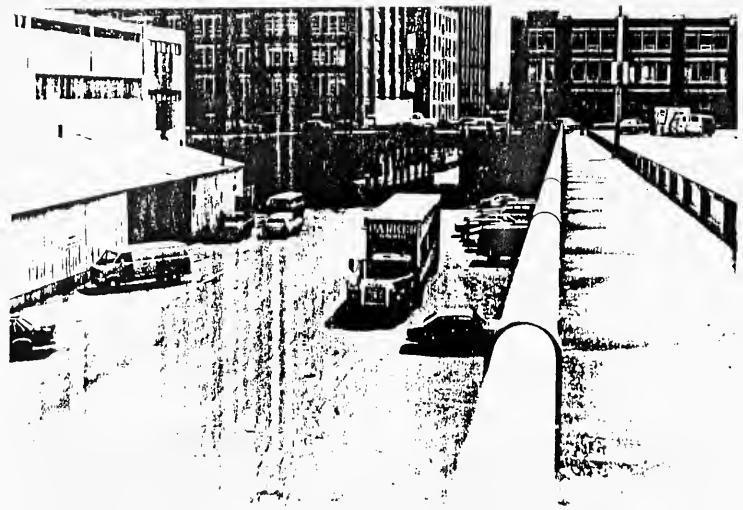
Each span of three 18' pin connected trusses



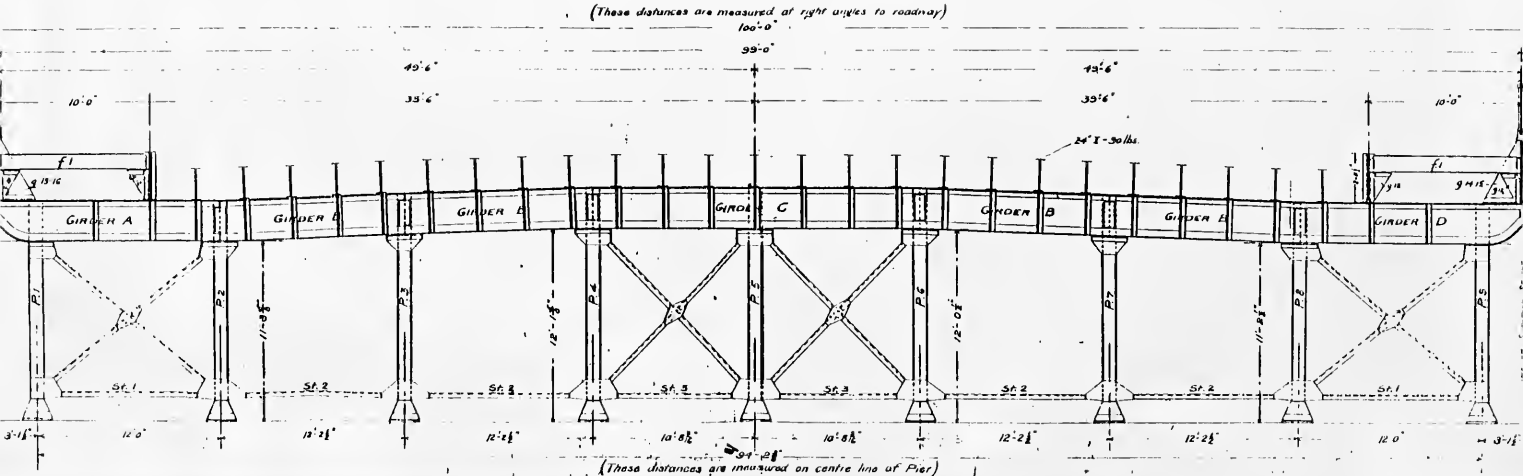




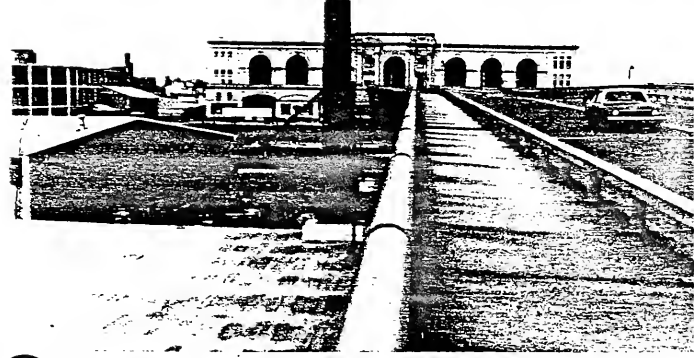
B STREET BRIDGE

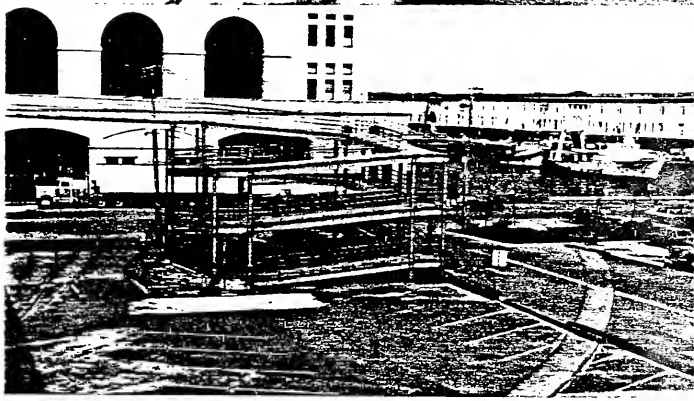


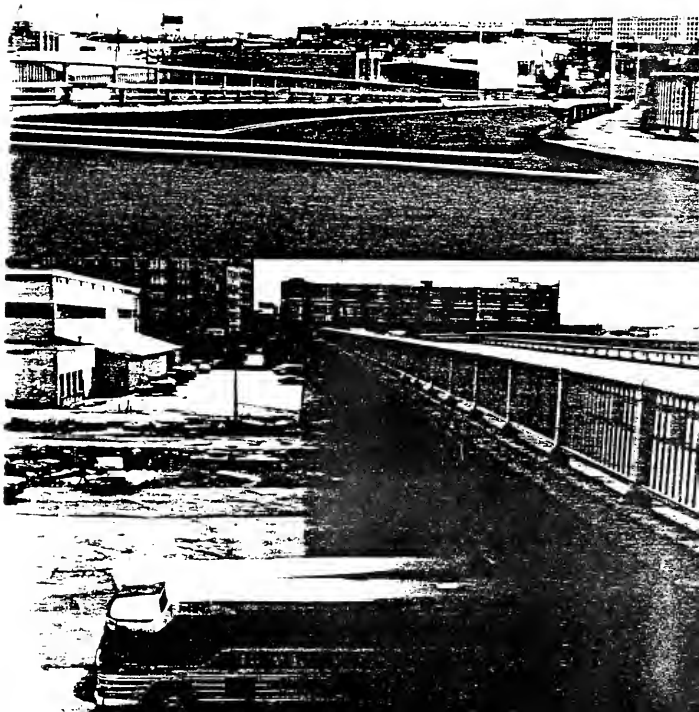
Summer Street at C Street



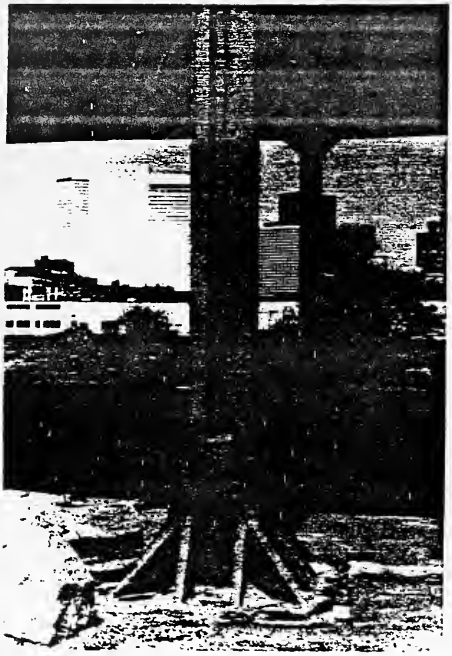
CROSS SECTION OF BRIDGE.





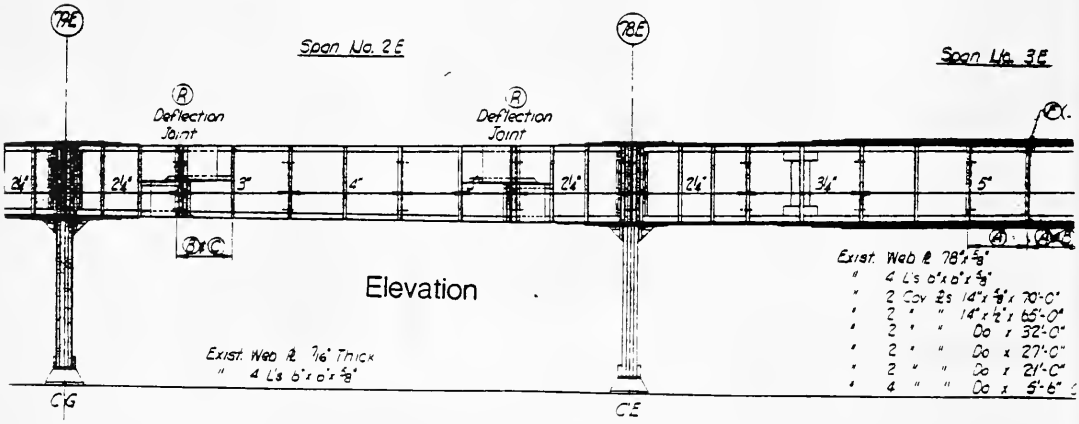


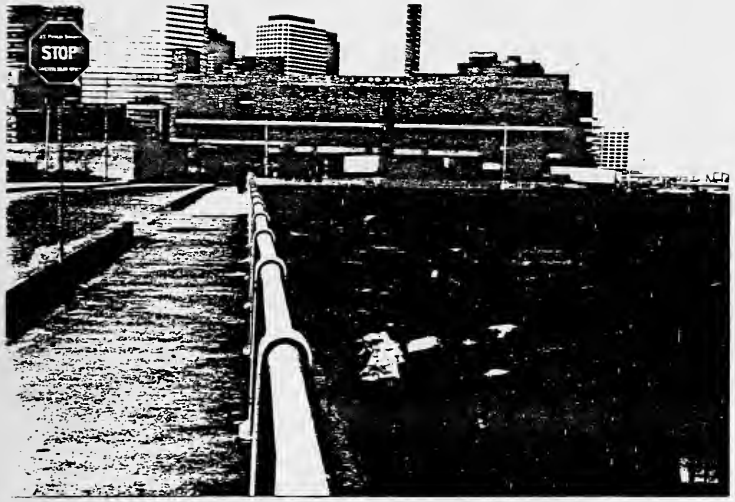
COMMONWEALTH VIADUCT



Pier Detail

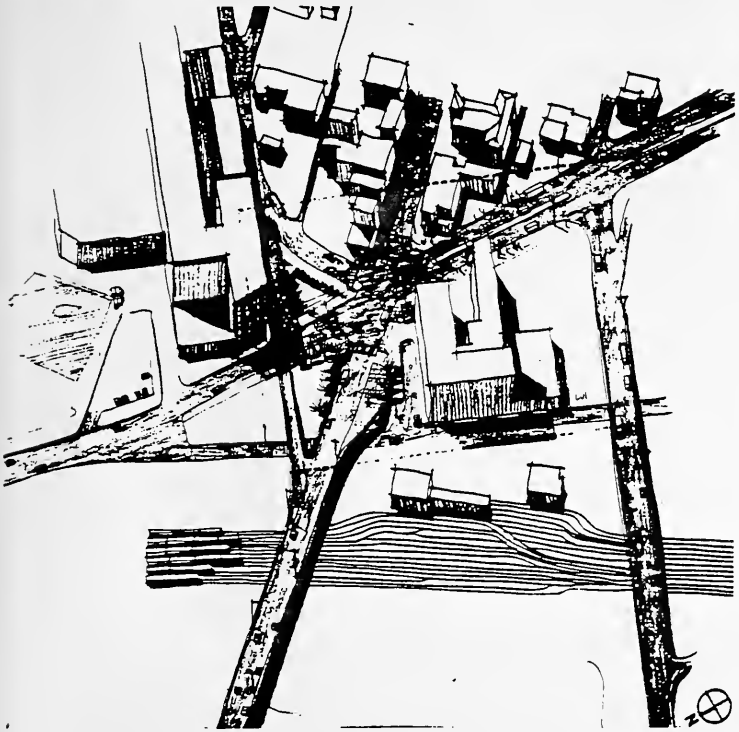
Intersection at Summer Street





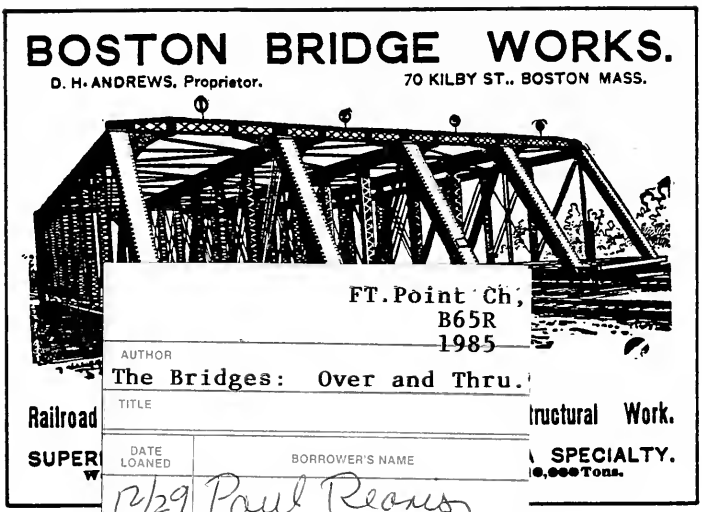
DORCHESTER AVENUE BRIDGE

Dorchester Avenue Bridge - Originally a rectractable bridge now fixed in place and owned by the U. S. Postal Service.



Compiled by Sandra Swaile,

Urban Design Department



AUTHOR
The Bridges: Over and Thru.

TITLE

DATE LOANED	BORROWER'S NAME
12/29	Paul Reans